

Common-Sense Model Mastery: How Physicians Can Obtain Better Patient-Adherence and Outcomes

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Patient Non-Adherence

- ▶ “The key mediator between medical practice and patient outcomes” (Kravitz & Melnikow, 2004)
- ▶ Non-adherence:
 - 20-50% to prescribed medicines (Kripalani, Yao, & Haynes, 2007)
 - As high as 70% to prescribed diet/exercise (Thier et al, 2008)
- ▶ Consequences:
 - Poorer medical outcomes
 - Higher health care costs
 - Higher rates of emergency care usage

What is needed?

- ▶ McDonald, Garg, & Haynes (2002):
 - Few interventions have had significant effects on adherence (even fewer on outcomes)
 - These effects were modest
 - Interventions were complex and labor-intensive
- ▶ We need efficient, effective interventions for time-limited medical encounter (Leventhal et al, 2008)
- ▶ Van Dulmen et al (2007): more studies are required that *compare* theoretical mechanisms of patient non-adherence to each other

Current Study: Specific Aims

- ▶ Propose a theoretical mechanism for improving patient adherence and outcomes in the primary-care setting
- ▶ Construct validate a scale for this mechanism
- ▶ Longitudinally test two “opposing” theoretical mechanisms for improving patient adherence *and outcomes*

The Medical Encounter: What Patients Take Away

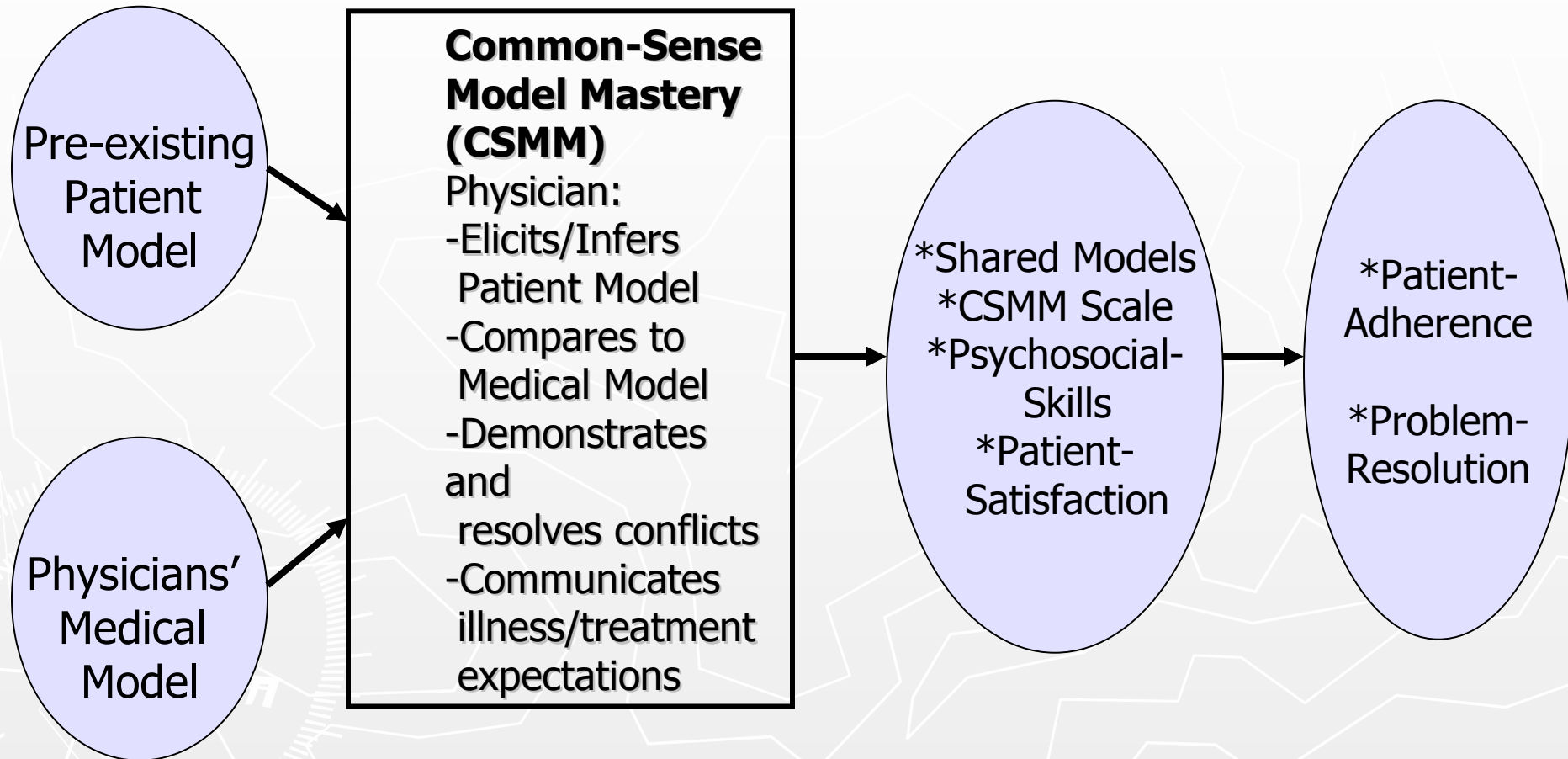
- ▶ Adherence measures represent “the extent to which a patient’s behavior ...coincides with medical or health advice” (Haynes, McDonald, and Garg, 2002)
- ▶ Treatment efficacy attitudes formed during medical encounter (DiMatteo et al, 2003)
- ▶ Patient understanding of: illness, treatment, self-care required, circumstances for return-care
- ▶ 78% of patients lacking understanding of one and 51% of two or more (Engel et al 2008)

Pre-Visit

During Visit

Post-Visit

1-Month Follow-Up



402 Patients, 34 Physicians, at a Research Hospital in New Jersey from Summer 2007 to Winter 2008

Psychosocial Skills of the Physician

- ▶ “Bedside Manner”
 - Verbal/Nonverbal expression of emotions
 - Perception of patient’s emotions
 - Showing concern for patient’s family life
 - Communication style: tone of voice, eye contact, touch
 - Weissman et al (2006), Roter et al (2006), DiMatteo et al (2003)
- ▶ Van Dulmen et al (2007): Psychosocial Skills generally lack satisfying theoretical mechanism
- ▶ Psychosocial Skills → liking of and trust in the doctor (Lings et al, 2003) → patient satisfaction → adherence
- ▶ Kinmonth et al (2007): Psychosocial Skills-based intervention resulted in worse outcomes compared to standard care

CSMM Scale: Patient-reports of physicians' CSM-related behaviors

- ▶ “The doctor told me what s/he was looking for during the physical exam: Yes/No”
- ▶ “The doctor told me what I might expect when taking my medication/treatment: Yes/No”
- ▶ “The doctor told me how to monitor my problem to see if the treatment is working: Yes/No”

Scale Reliability, Psychometric Properties, and Validity:

- ▶ Internal consistency: .79
- ▶ One factor solution
- ▶ Criterion-validity: CSMM was a significant predictor of all hypothesized outcomes
- ▶ Discriminant validity: CSMM gave unique prediction of outcomes to Psychosocial Skills

Psychosocial Skills: 5 Likert-Scale items

- ▶ E.g., “My doctor understood my feelings about this problem”
- ▶ “My doctor was sympathetic about my problem”
- ▶ “My doctor is concerned about my feelings”

Patient Adherence:

- ▶ 5 Likert-Scale items (based on the MARS; Horne & Weinman, 2002)

Problem Resolution:

- ▶ Relative: “Is the problem any better: Yes/No?”
- ▶ Absolute: “Is the problem completely gone: Yes/No?”

Patient Satisfaction:

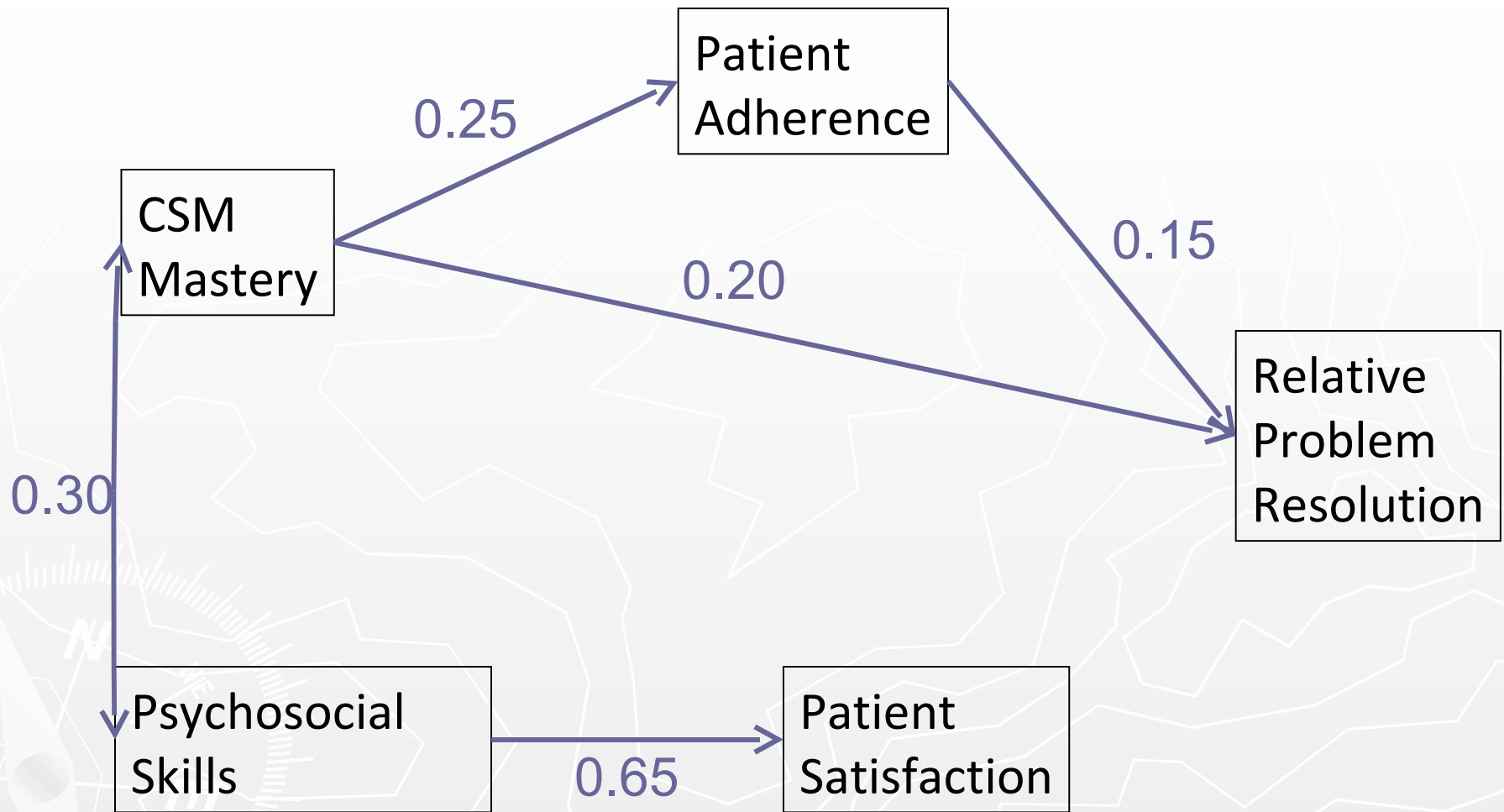
- ▶ 2 Likert-Scale items, from beginning and end of Post-Visit Interview

Analysis Method for Theoretical Comparison

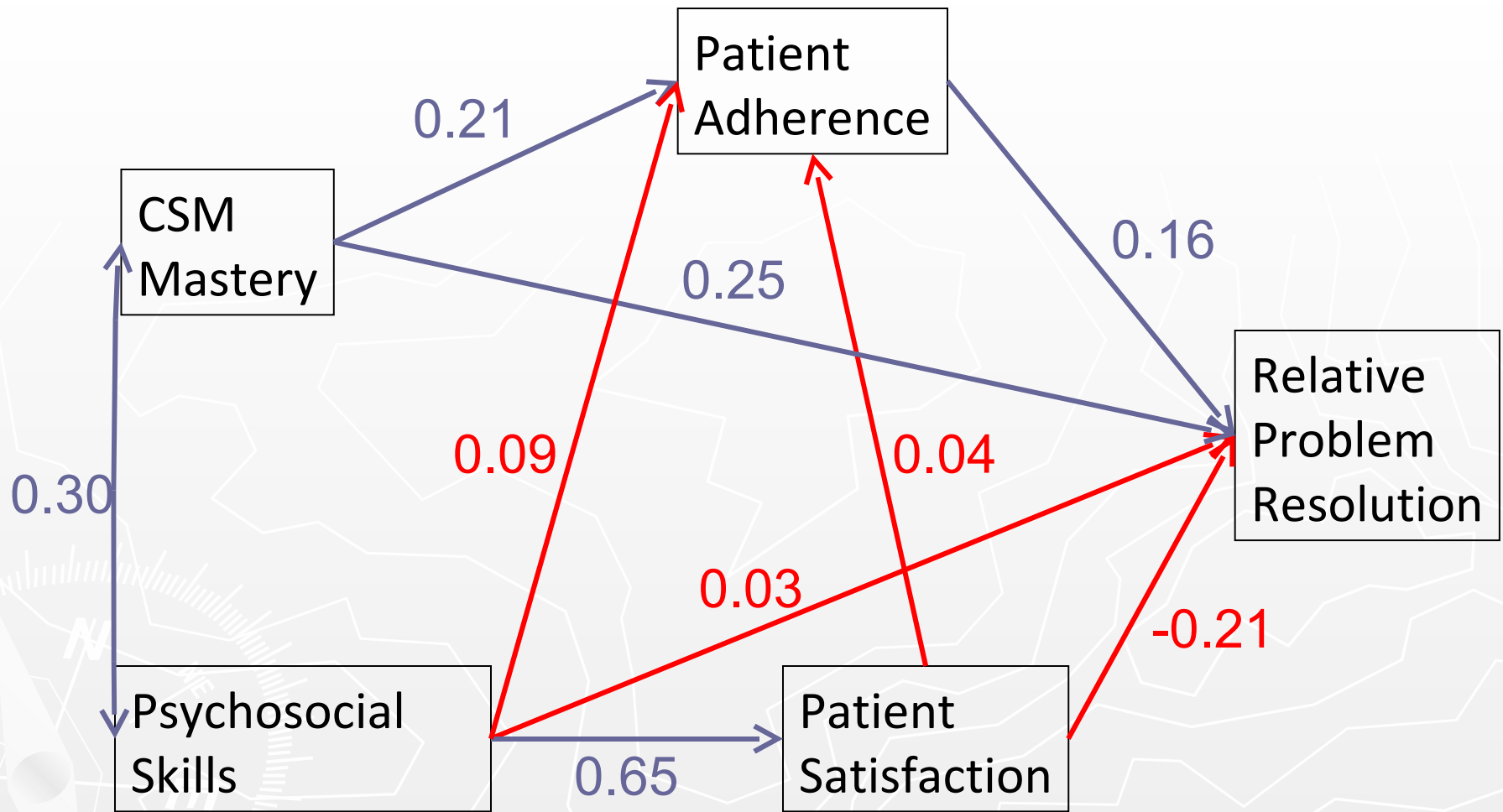
▶ Causal Modeling:

- First Model: hypothesis-congruent model with only CSM Mastery predicting adherence and problem resolution at 1-Month follow-up
- Second Model: with additional pathways from Psychosocial Skills and patient satisfaction to adherence and problem resolution

▶ Is improvement in model-fit significant with addition of paths? How do the overall fit indices of the two models compare?



Fit Indices: Chi-Sq = 8.93 (df=5), RMSEA = .08, NFI and NNFI = .91, CFI = .96, GFI = .97, AGFI = .91



Fit Indices: Chi-Sq = 3.47 (df=1), RMSEA = .147, NFI = .96, NNFI = .72, CFI = .97, GFI = .99, AGFI = .82

Conclusions

- ▶ CSM Mastery Scale validated for use in a primary care setting
- ▶ Extend to specialty setting
- ▶ CSMM superior to Psychosocial Skills in predicting Patient Adherence and Problem Resolution**
- ▶ Patient Satisfaction not appropriate intermediate outcome to adherence or to outcomes