

# Long Term Outcomes of a Stepped Intervention on Self-Management Behaviors among Primary Care Patients with Pain and Depression.

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# SCAMP Study

Stepped Care for Affective  
disorders and  
Musculoskeletal Pain

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# OBJECTIVES

- ✓ Describe SCAMP Self-Management Intervention
- ✓ Present 12 month patient self-efficacy and self management outcomes
- ✓ Present PSM Dose effect on pain and depression

# The Problem of Pain

- Pain accounts for 20% of all **clinic visits**
- Analgesics = 12% of all **prescriptions**
- \$100 billion dollars/yr in **health care costs**
- Leading cause of **work loss & disability**
- Leading reason for **alternative medicine**

# Pain Self-Management (PSM)

- Demonstrated moderate effect on pain and functioning
  - Meta-analysis by Dixon et al Health Psychology (2007) concluded that psychosocial interventions for pain had a moderate effect on pain related functioning
- Less known about PSM effect on functioning among patients with pain and depression

# SCAMP Trial Design

## PAIN and DEPRESSION

*Stratified Randomization*

(n = 123)

- *Pain location (Back vs. Leg)*
- *Clinic site (IU vs VA)*

(n = 127)

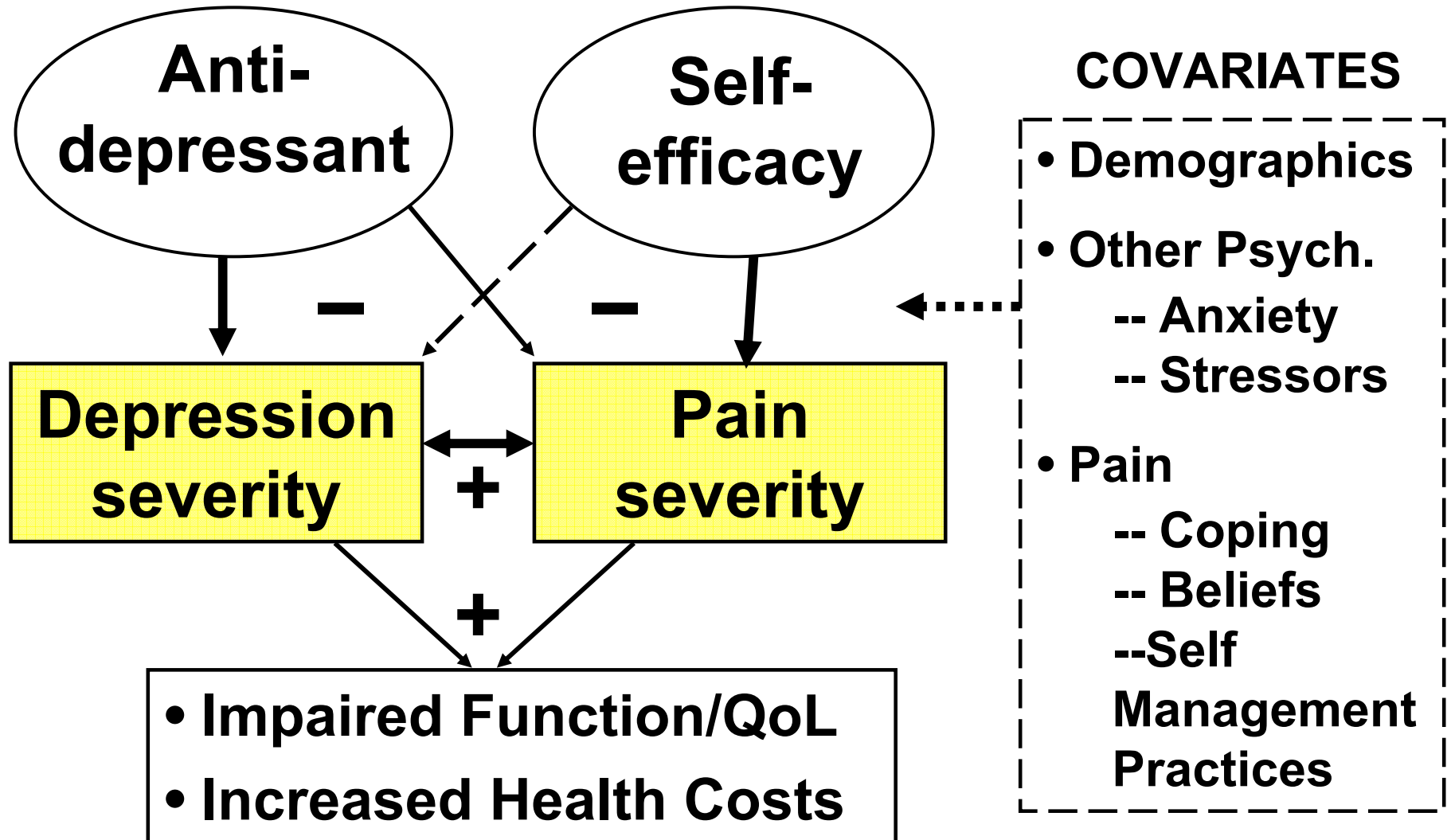
### Stepped Care Management

1. Antidepressants – optimization
2. Pain self-management (6 sessions)

### Usual Care

Outcome Assessment at 1, 3, 6, and 12 months

# SCAMP Conceptual Model



# Theoretical Framework: Social Cognitive Theory

- SELF EFFICACY

- (i.e., confidence)

- 4 INFLUENCES

- Persuasion
- Social Modeling/  
Vicarious Experiences
- Past Achievements
- Reinterpretation of  
Symptoms/Sensations

- SELF REGULATION

 Self-monitoring =  
Behavior Change

# Patient Pain Self-Management

- Strategies based upon Evidence from AHRQ Back Pain PORT study –e.g., minimal bed rest
- Adapted Lorig's Stanford Arthritis Program for Wishard patients with Acute Low Back Pain (Damush, Weinberger, Perkins et al 2002; 03
  - Improved back pain specific functioning
  - Improved self-efficacy to manage symptoms

# Building Self-Efficacy

## 1. PERSUASION

- CM explanations
- Physician recommendations
- PT/MD Communication

## 2. SOCIAL MODELING

- Peers
- Material models
- CM demonstrations
- PT practicing strategies

## 3. PAST

### ACHIEVEMENTS

- Success/failure with exercise in past

## 4. Reinterpretation of sensations & symptoms

- Pain does not always mean “harm”
- Addressing fears
- Changing Negative thoughts to Positive
- Distraction

# Build Self-Efficacy

- Goal setting-specific as possible
- Realistic, achievable goals
- Track (self-regulate) behaviors
- Problem solve, use substitution

# Step 2 – Pain Self-Management

| WHEN  | WHERE  | WHAT (Treatment Action)      |
|-------|--------|------------------------------|
| 12 wk | Clinic | PSMP – Session 1             |
| 14 wk | Phone  | PSMP – Session 2             |
| 16 wk | Clinic | PSMP – Session 3             |
| 18 wk | Phone  | PSMP – Session 4             |
| 20 wk | Clinic | PSMP – Session 5             |
| 22 wk | Phone  | PSMP – Session 6             |
| 24 wk | Clinic | Close Phase 2. Phone q 3 mo. |

# Pain Self-Management Program

## *(example components)*

- Education – pain; vocabulary; red flags;
- Identifying /modifying fears and beliefs
- Goal-setting and problem-solving
- Exercise – strengthening; walking, yoga.
- Relaxation; deep-breathing; progressive muscle relaxation; guided imagery
- Changing Thoughts/Distraction
- Handling pain flare-ups
- Working with clinicians and employers-support

# Distraction – Squirrel Rehabilitation



# Analyses Plan

- ✓ Compared Group Characteristics at Baseline
- ✓ Compared Group Means at 12 months
  - ✓ Self-Efficacy
  - ✓ Self-Management Behaviors
- ✓ PSM Dose Effect – Intervention Arm Only
  - ✓ Pain
  - ✓ Depression

# Measures

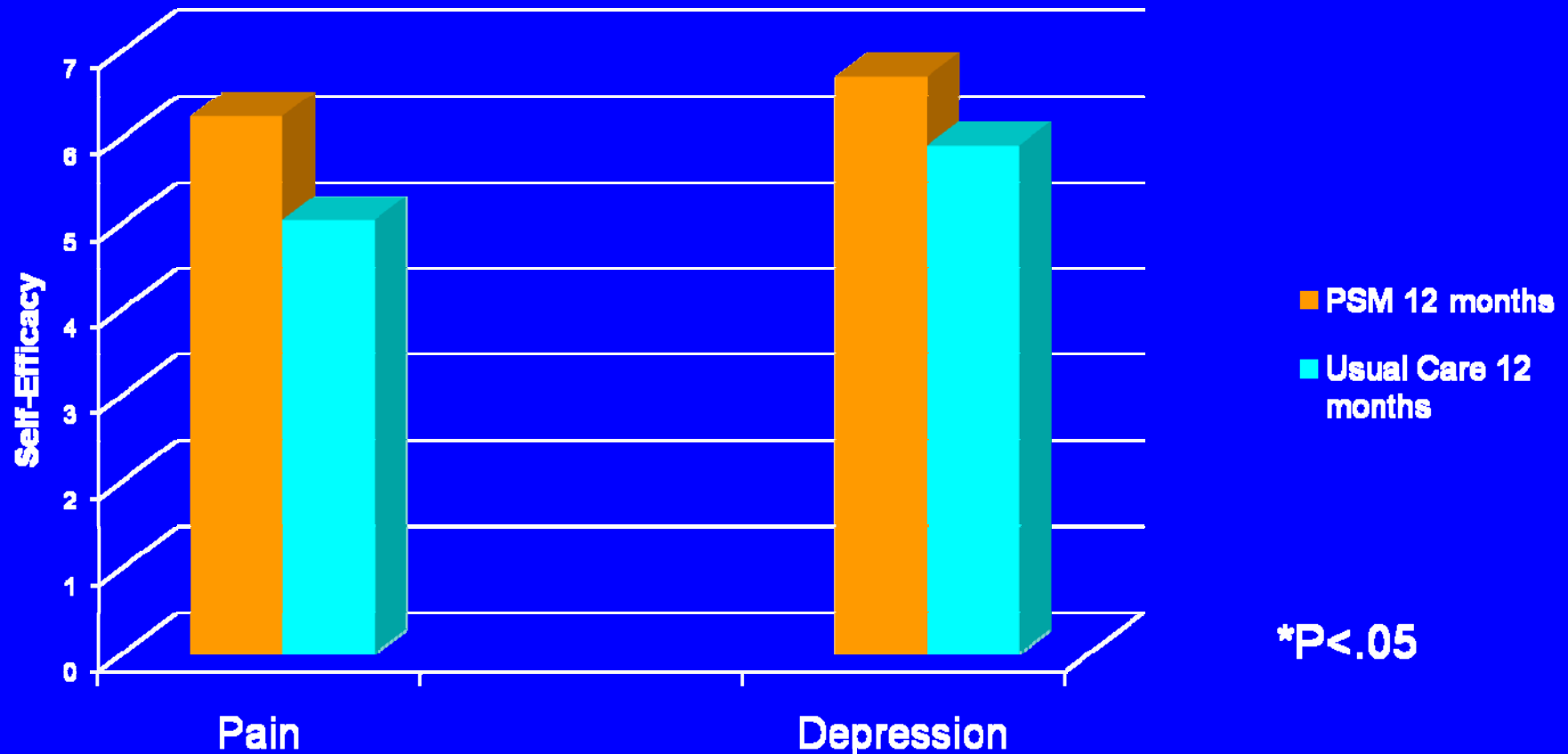
- **Brief Pain Inventory (BPI) Interference during past week (0-10 scale)**
- **SCL-20 depression severity (1-5 scale)**
- **Self-management behaviors (Lorig)**
  - **Frequency/minutes per week**
- **Self-efficacy to manage symptoms (0-10)**
  - **Pain**
  - **Depression**

# Baseline Characteristics

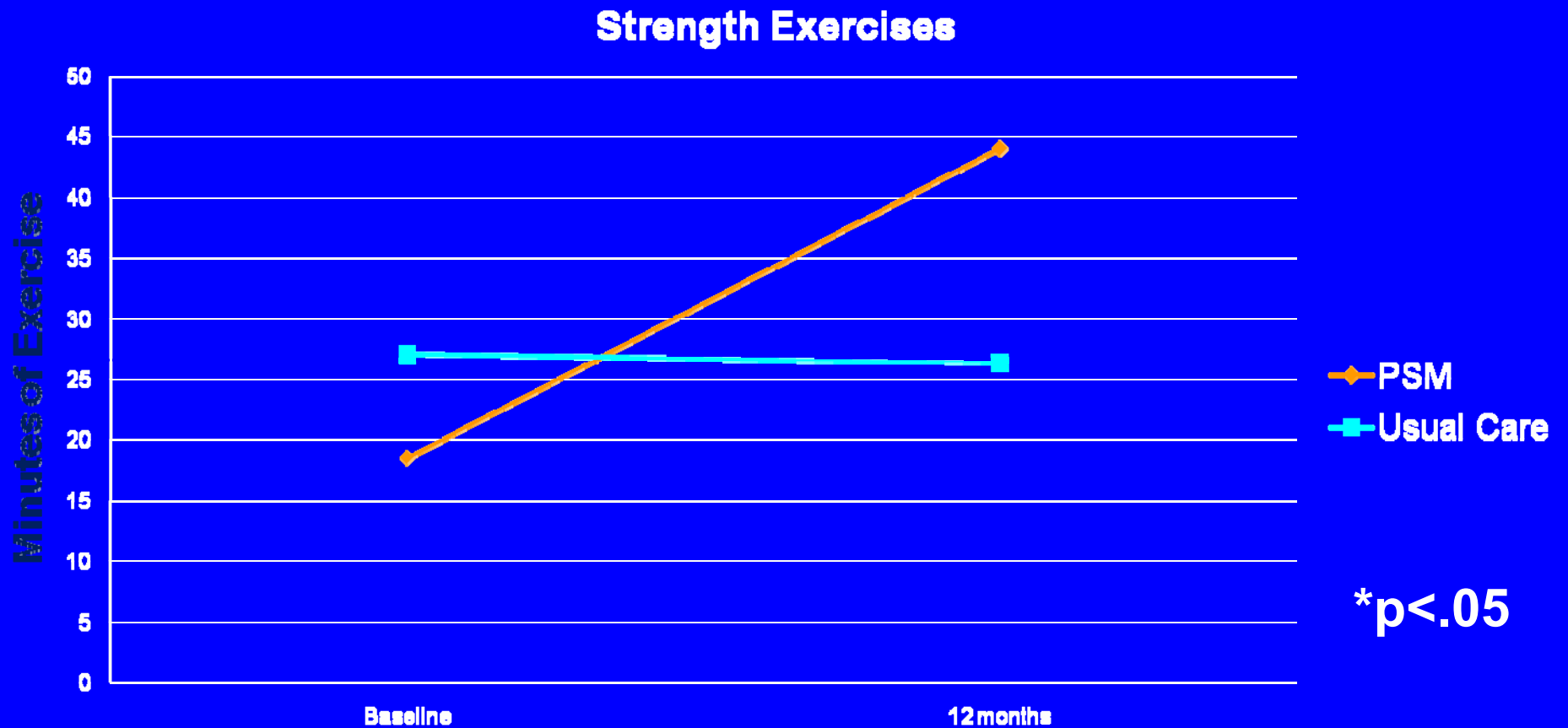
| Baseline Characteristics                | Stepped Care<br>(N=123) | Usual Care<br>(N=127) |
|---|-------------------------|-----------------------|
| Mean (SD) age, yr                       | 55.1 (12.6)             | 55.8 (11.0)           |
| Women, n (%)                            | 69 (56)                 | 63 (50)               |
| Race, n (%)                             |                         |                       |
| African-American                        | 42(34)                  | 49(39)                |
| Education, n (%)                        |                         |                       |
| Less than or equal high school graduate | 82 (67)                 | 80 (64)               |
| At least some college or trade school   | 41 (33)                 | 46 (37)               |
| Pain location, n (%)                    |                         |                       |
| Low back                                | 76 (62)                 | 75 (59)               |
| Hip or knee                             | 47 (38)                 | 52 (41)               |
| Number of comorbid medical conditions   | 2.7 (1.6)               | 2.6 (1.4)             |

# PSM reported Self-efficacy

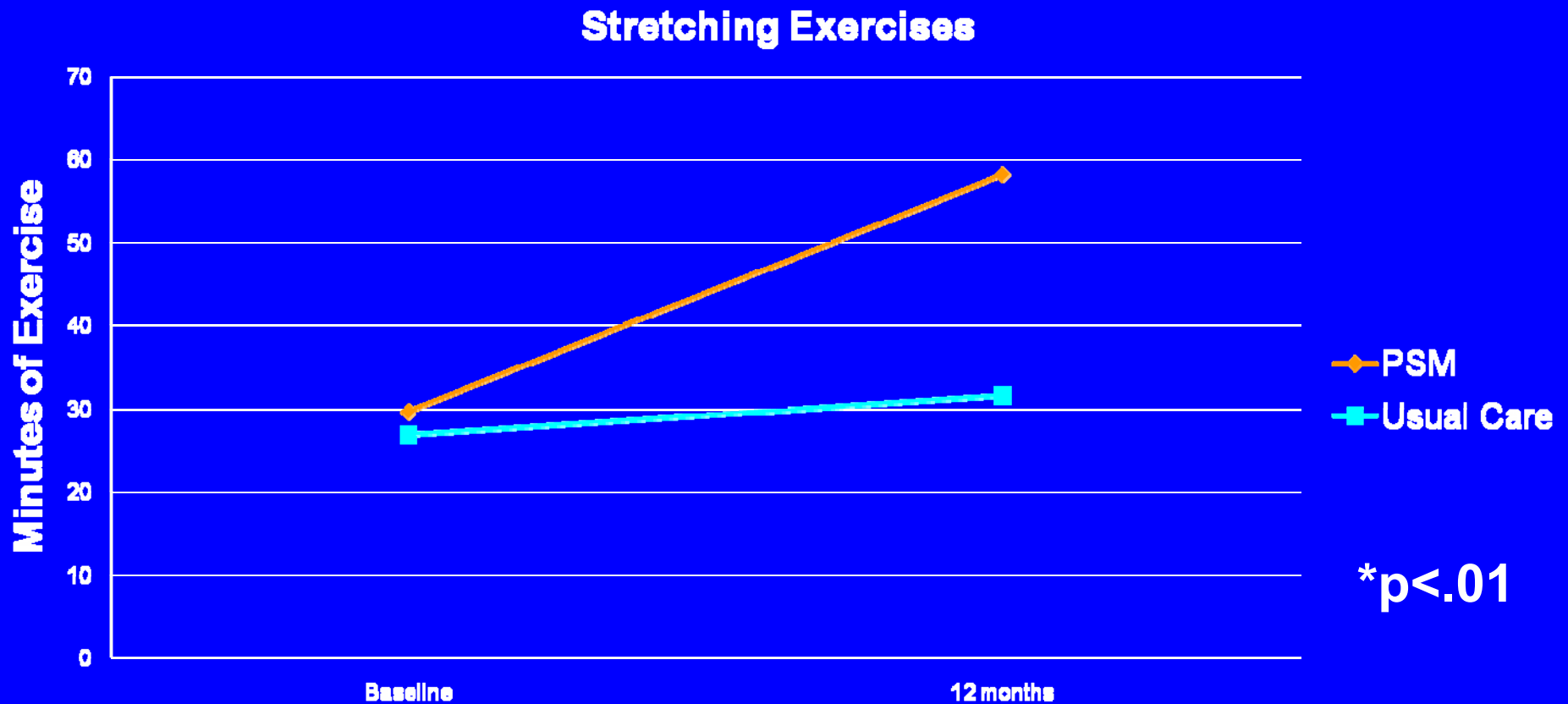
Between Groups 12 Months



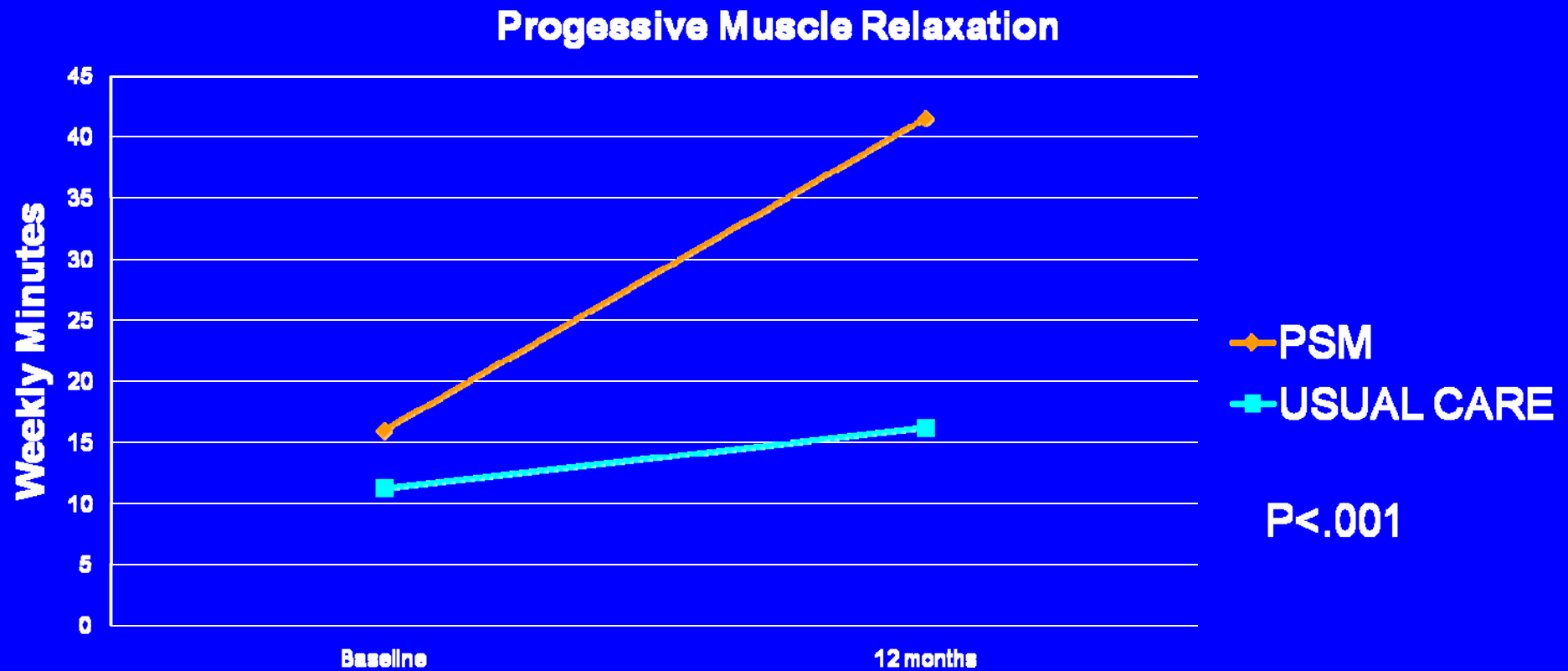
# PSM ↑ Frequency of Strength Exercises



# PSM ↑ Frequency of Stretching Exercises

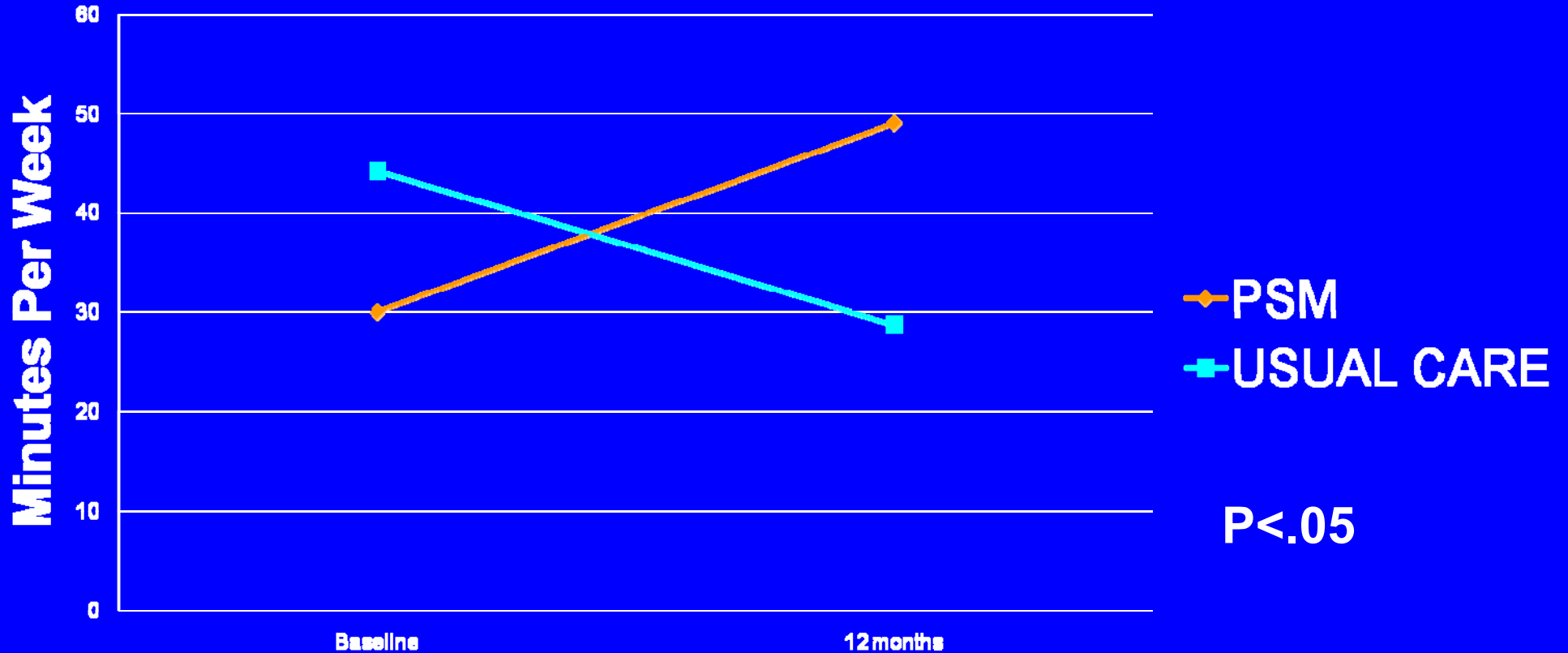


# PSM ↑ Frequency of Progressive Muscle Relaxation



# PSM Visualization for Stress Reduction

Visualization



# PSM DOSE

- Offered 6 PSM sessions to Intervention Arm (N=123)
- Created a total PSM session received score
- 51.6% received 5-6 sessions
- 18.6% received no sessions

# PSM Dose Response on Depression Severity at 12 months

Total # of PSM sessions

Parameter estimate = 0.099,  $p < 0.002$

Full dose (6 PSM sessions) = 0.60

Improvement in depression severity

Controlling for age, sex, ses, hospital site, and  
baseline depression severity

# PSM Dose Response on Pain Interference at 12 months

Total # of PSM sessions

Parameter estimate =  $-0.42$ ,  $p < 0.001$

Full dose (6 PSM sessions) = 2.5  
improvement in pain

Controlling for age, sex, ses, hospital site, and  
baseline pain severity

# Limitations

- Patients continued receiving antidepressants during PSM, thus, study was not designed to test the separate intervention components.
- We did not validate the self management self reported data (i.e., exercise). However, we used validated measures shown to be sensitive to change.

# Conclusions

- Patients randomized to the Stepped care intervention reported **greater patient self-efficacy and self management behaviors** to manage pain and depression at 12 months compared to patients receiving only usual care.
- PSM **dose of total sessions received was related** to improvements in our primary outcomes of pain and depression severity.
- Implementation of program within usual care.