

Pain Self-Management Programs for Individuals with Disabilities and Chronic Disease

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Thank You to...



the study participants
and patients from whom
I've learned a lot about
living life with chronic
pain

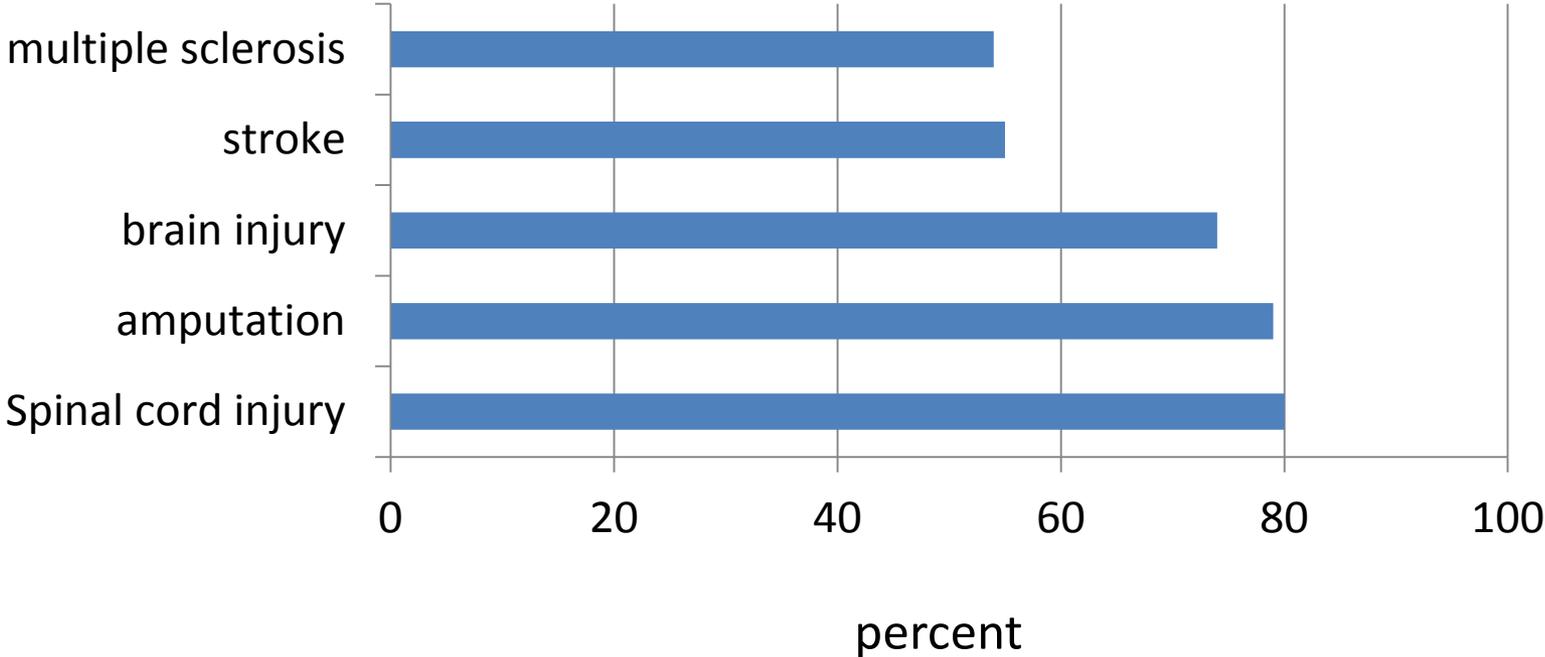
Walk MS, 2009, Greater Northwest Chapter.



Overview

- Rationale for our intervention research on self-management interventions for pain secondary to disability & chronic neurological conditions
- Preliminary findings from a randomized controlled trial evaluating a telephone-delivered cognitive behavioral therapy (CBT) for pain in individuals with acquired limb loss, multiple sclerosis, and spinal cord injury
- Future directions for advancing pain self-management in these populations

Chronic Pain is a Significant Problem for Many People with Acquired Disabilities



Psychosocial Factors & Disability Pain: Results from a Systematic Review

Psychosocial factors are significantly associated with pain & dysfunction in acquired amputation, multiple sclerosis, & spinal cord injury, in particular:

- Catastrophizing cognitions
- Coping: task persistence, guarding, & resting
- Perceived social support & solicitous responding

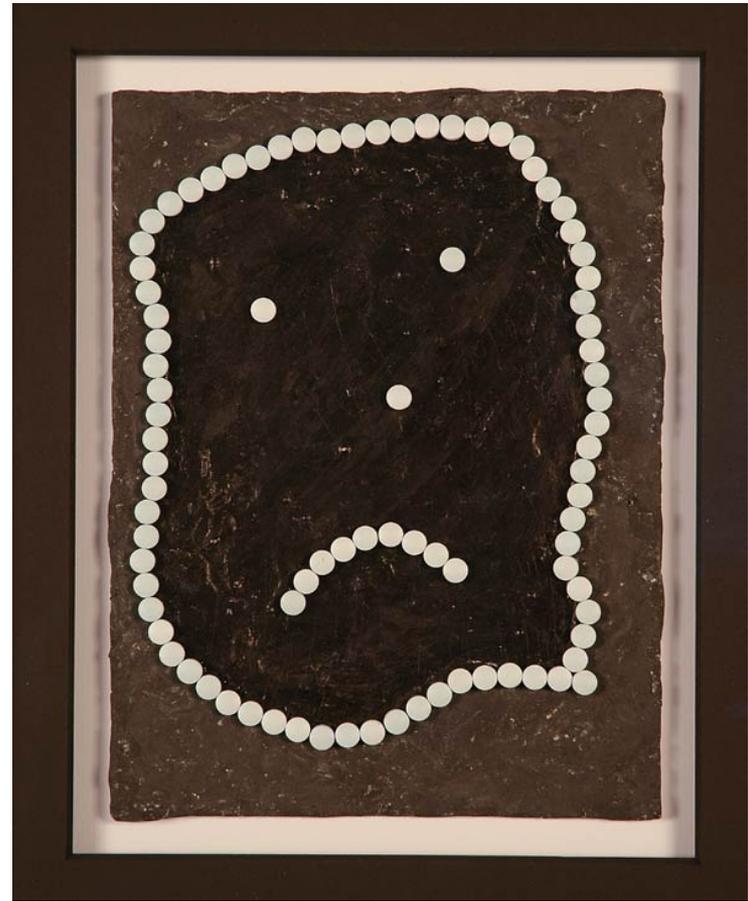
Jensen et al. (2011). Arch Phys Med Rehabil 2011;92:146-60.



Gaps in Treatment

- Pain relief is rare
- Few (10-15%) individuals with chronic pain and acquired disability report having tried a self-management or psychosocial intervention for pain

Ehde et al., 2006; Hanley et al., 2006; Turner et al., 2001; Widerstrom-Noga & Turk, 2003



Happy Pills Ain't So Happy (Mark Collen)
Crushed & whole Welbutrin, acrylic media, & charcoal. Pain Exhibit © 2011.

Inadequate Access to Self-Management?

- In a randomized controlled trial of CBT for pain after disability, over half (n=141) of those screened for the RCT wanted to participate but ultimately did not, primarily due to transportation barriers (*Ehde et al., under review.*)
- Survey research has suggested that many people (65%) with comorbid chronic pain and disability report inadequate access to pain treatments, including psychosocial treatments (*Dillworth et al., under review.*)

Telephone Intervention for Pain Study (TIPS)



Harborview Medical Center, UW Medicine

(NCMRR, NICHD, R01 HD057916, HD057916-03 S1)



TIPS Study Aims



1. To evaluate the efficacy of a telephone-delivered CBT pain intervention relative to a telephone-delivered pain education intervention in adults with limb loss (LL), multiple sclerosis (MS), or spinal cord injury (SCI) via a randomized controlled trial (RCT)
2. To examine potential mediators and moderators of treatment effects

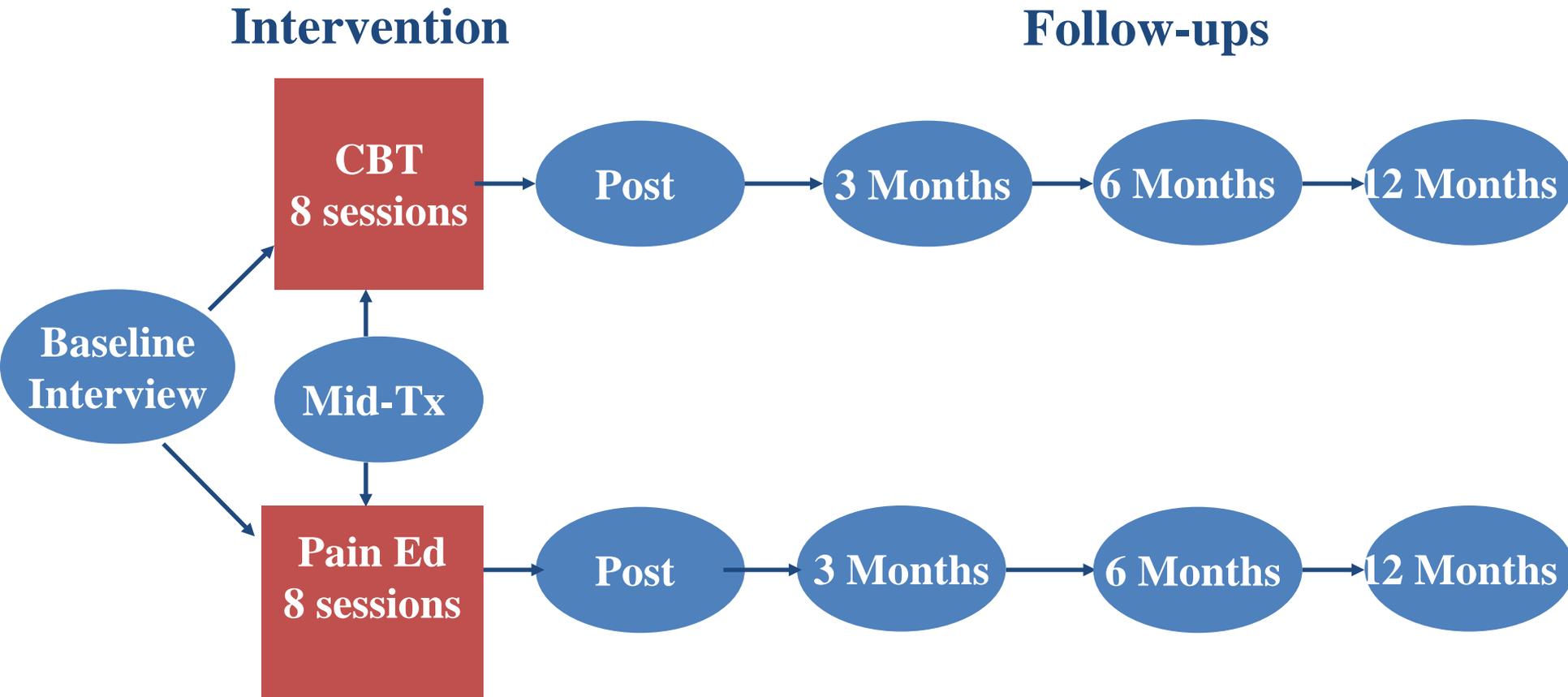
Inclusion Criteria

- Definitive diagnosis of LL, MS, or SCI confirmed by participant's provider
- Average pain intensity in the past month of ≥ 4 on 0-10 numeric rating scale (NRS)
- Pain worse or started post onset of disability
- Pain of at least six months duration & present in the last month \geq half the days
- Read and speak English
- Age 18 or older

Exclusion Criteria

- Severe cognitive impairment defined as ≥ 1 error on Six-item Screener (Callahan et al., 2002)
- Self-reported current or previous participation in a CBT intervention for pain or other psychological disorders
- Previous participation in a clinical trial of any psychological treatments for pain

TIPS Study Design



Measures

All measures were administered at pre-treatment, mid-treatment, post-treatment, and 3-, 6-, & 12 month post randomization

Primary Outcome: Average pain intensity in the past week

- Asked to rate their pain intensity in the past 24 hours using 0-10 numeric rating scale
- Collected 4 times within the week

Other Outcomes & Measures

- Secondary Outcomes
 - Pain Interference (Interference Scale BPI)
 - Depression: Patient Health (PHQ-9)
 - Global rating of improvement
- Mediators: catastrophizing cognitions, pain beliefs, & coping
- Process: credibility, expectations, motivation, adherence, therapeutic alliance
- Adverse events tracked

Procedures

- Participants randomly assigned after pre-tx data collection and immediately before Session 1 to:
 - Telephone-delivered CBT
 - Telephone-delivered pain education
- Treatment fidelity protocol includes:
 - Recordings of sessions
 - Therapist manuals
 - Session checklists
 - Weekly clinician meetings

Intervention Protocol

- 8 weekly 50-60 minute sessions conducted by phone at a scheduled time
- Brief (< 15") booster calls at 2, 4, 8, 12, 18, & 24 weeks made to both groups
- Study clinicians: postdoctoral fellows or clinical psychologists supervised by study investigators
- Detailed therapist & participant manuals are used

Cognitive Behavioral Therapy (CBT)

- Relaxation training adapted for disability (7 different exercises, available via CD or MP3 files)
- Behavioral activation & goal-setting
- Pacing
- Cognitive therapy
- Includes in-session rehearsal of skills, readings, & homework

Education Intervention (Ed)

- Information on a variety of pain topics relevant to disability, such as:
 - Facts about chronic pain in the individual's disability type
 - The physiological processes underlying pain
 - Comorbidities (e.g., depression, sleep)
- Interactive, supportive format
- Readings & related homework included
- CDs/MP3 files of readings included

Adaptations to Interventions

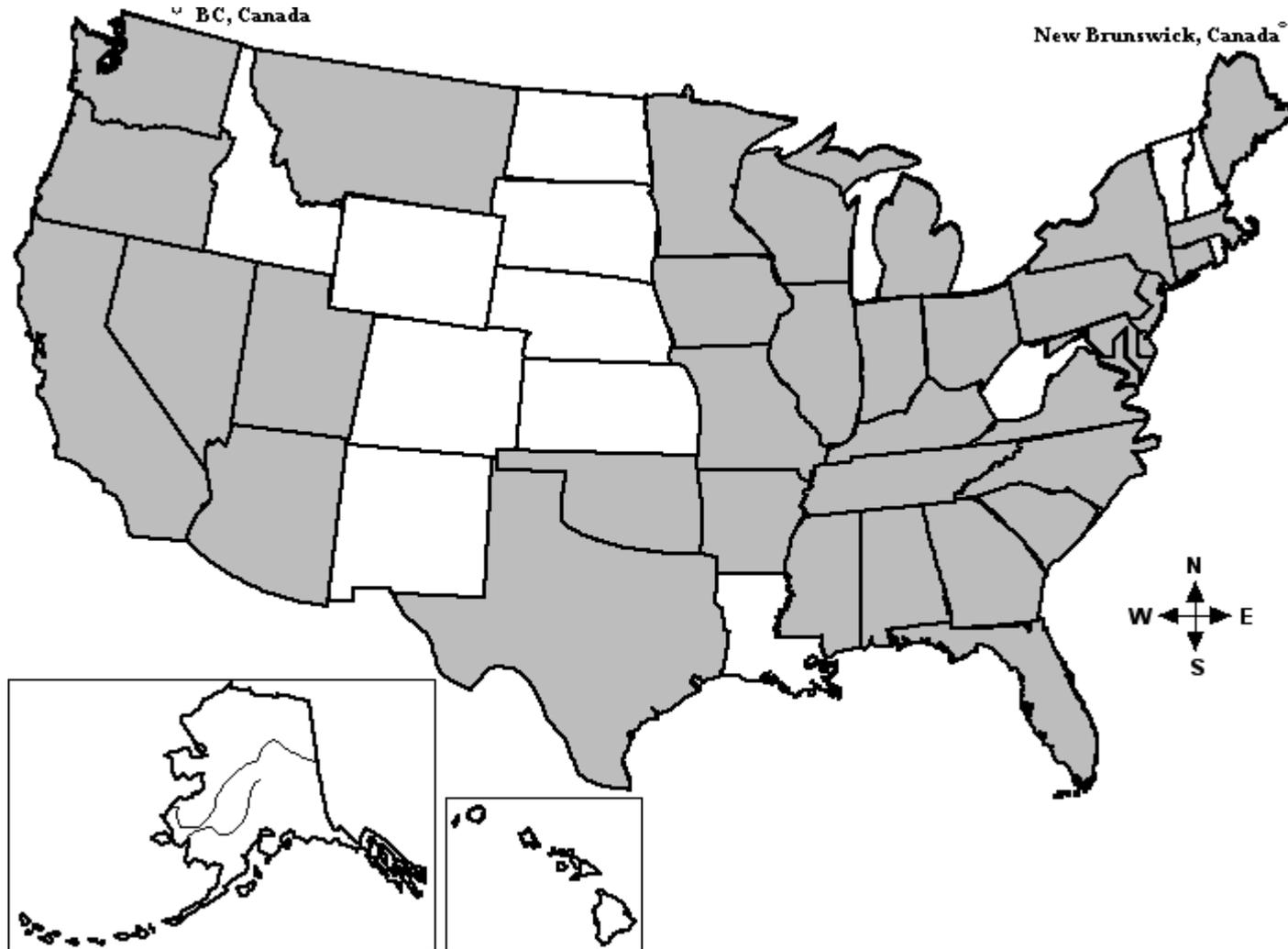
- Provide detailed & organized participant manuals to both groups
- Multiple formats for materials: CD, PDFs, large print, paper
- Deliberately query about ability to physically & cognitively complete homework
- Therapist helps problem-solve challenges to homework completion
- Use disability-specific examples in manuals



National Recruitment

188 participants randomized

- 39% SCI
- 43% MS
- 18% AMP

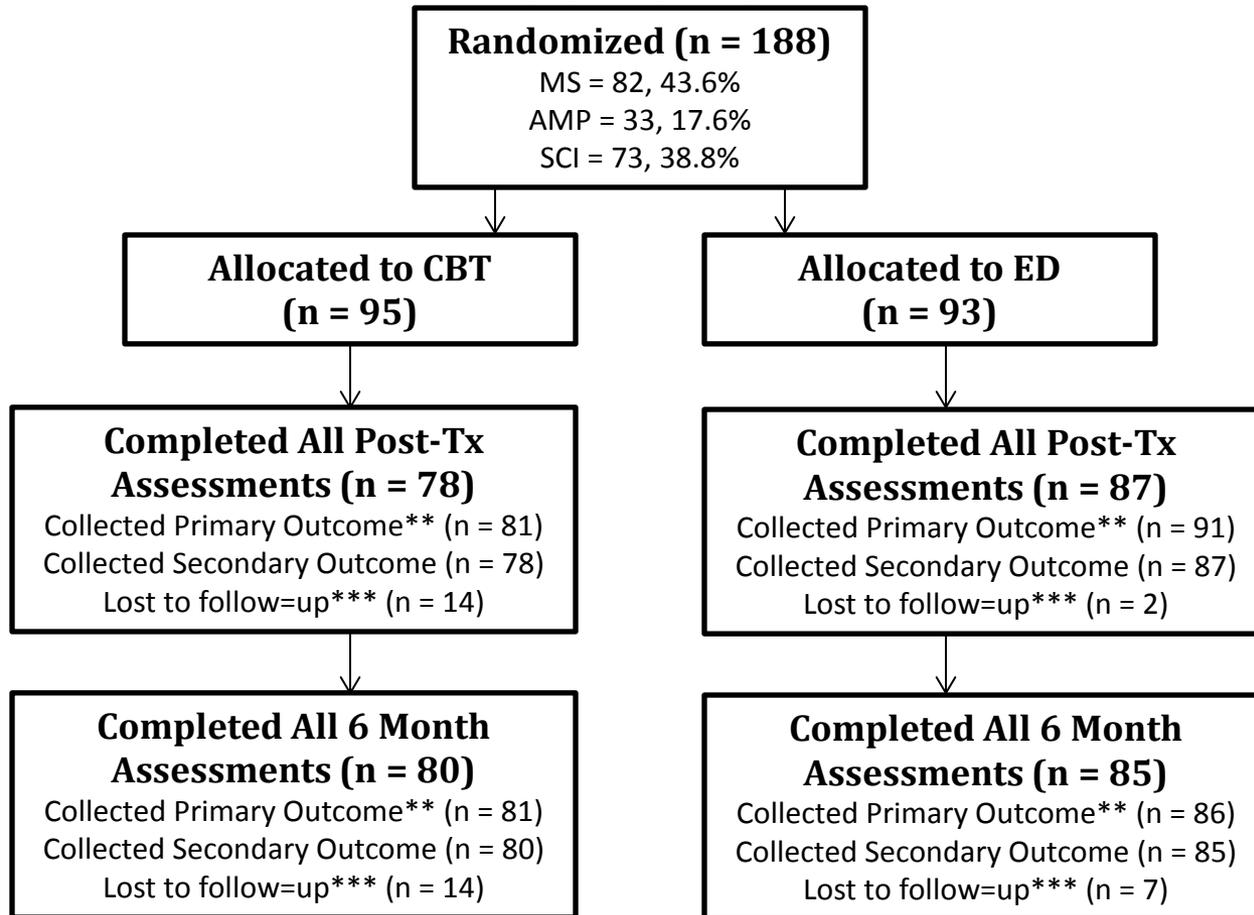


Description of the Sample

Variable	CBT	Ed	Total sample
Age (yrs)	53.8 (11.1)	52.8 (11.2)	53.3 (11.1)
Education (%)			
< 12 yrs	1.1	2.2	1.6
HS or GED	10.5	11.8	11.2
Some college/voc	37.8	39.8	38.9
College graduate	23.2	24.7	23.9
Grad or professional	27.4	21.5	24.5
% Male	41.1	44.1	42.6
% Married or Partnered	45.3	64.5	54.8
% Non-Hispanic White	91.6	92.5	92.0
Employed (%)			
Full-time	15.8	6.5	11.2
Part-time	15.8	14.0	14.9
Disabled	33.7	44.1	38.8

Telephone Intervention for Pain Study (TIPS) Consort Table

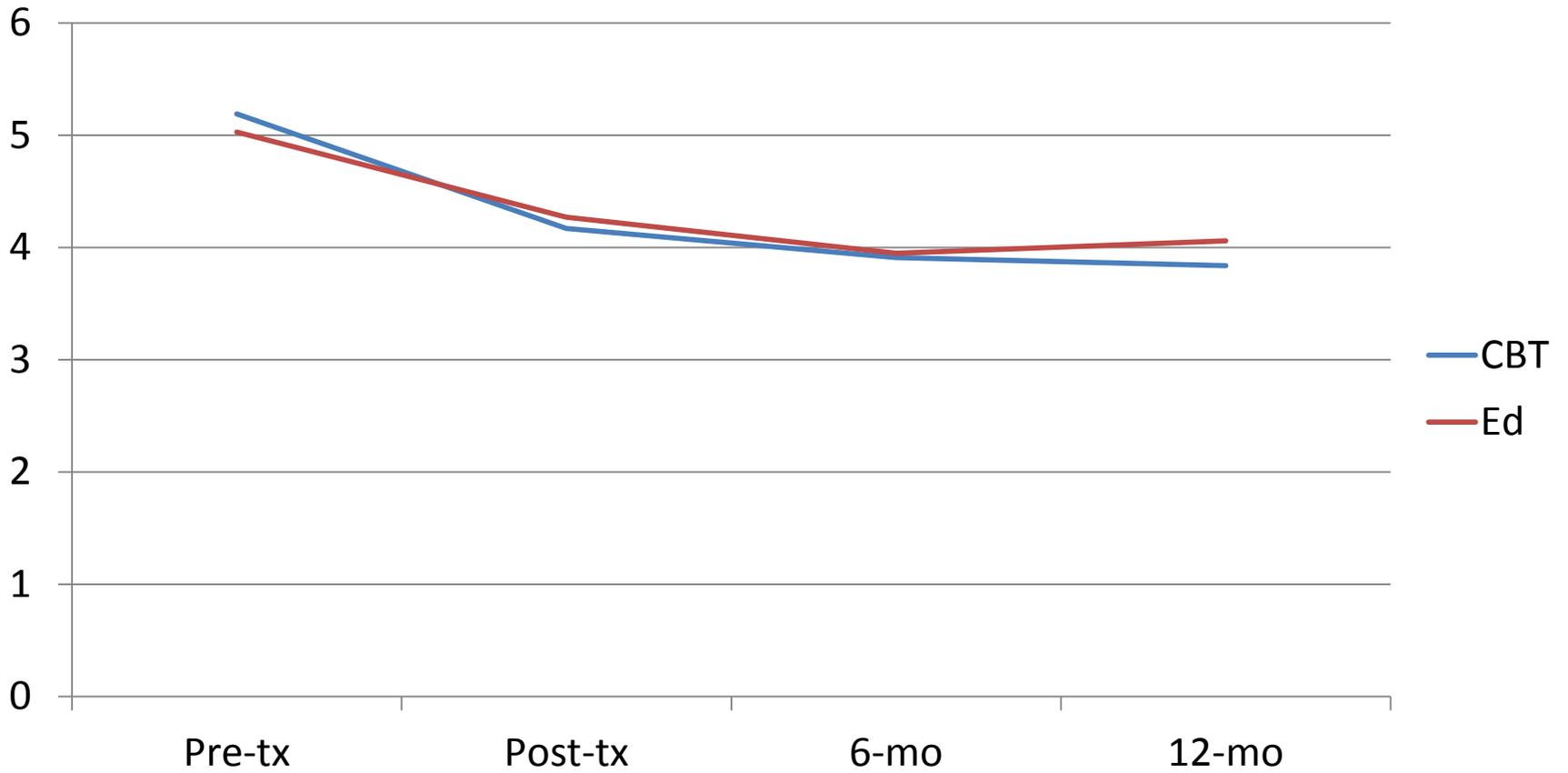
(4/16/13)



Adherence & Fidelity

- Treatment adherence:
 - CBT: 83.2% completed all 8 sessions
90.6% complete ≥ 4 sessions
 - Ed: 92.5% completed all 8 sessions
94.7% complete ≥ 4 sessions ($p = .07$)
- Therapist fidelity to both interventions was excellent:
 - 98% adherence to unique elements
 - 93% adherence to common elements
 - 100% adherence to proscribed elements

Pain Intensity



Treatment Responders

% who reported $\geq 30\%$ reduction
in average pain intensity

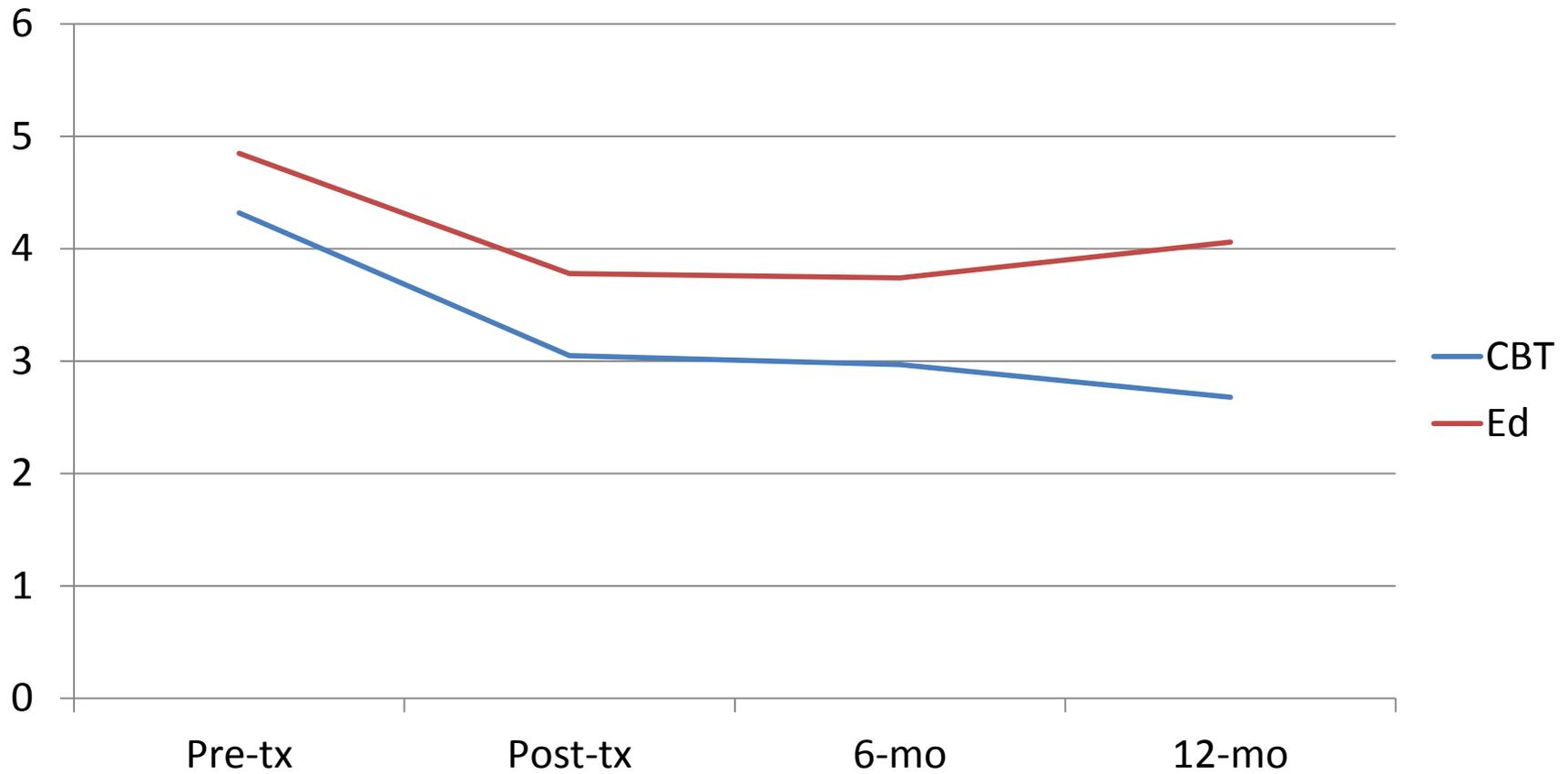


CBT: 30.5%

Ed: 28.0%

(pre- to post-treatment)

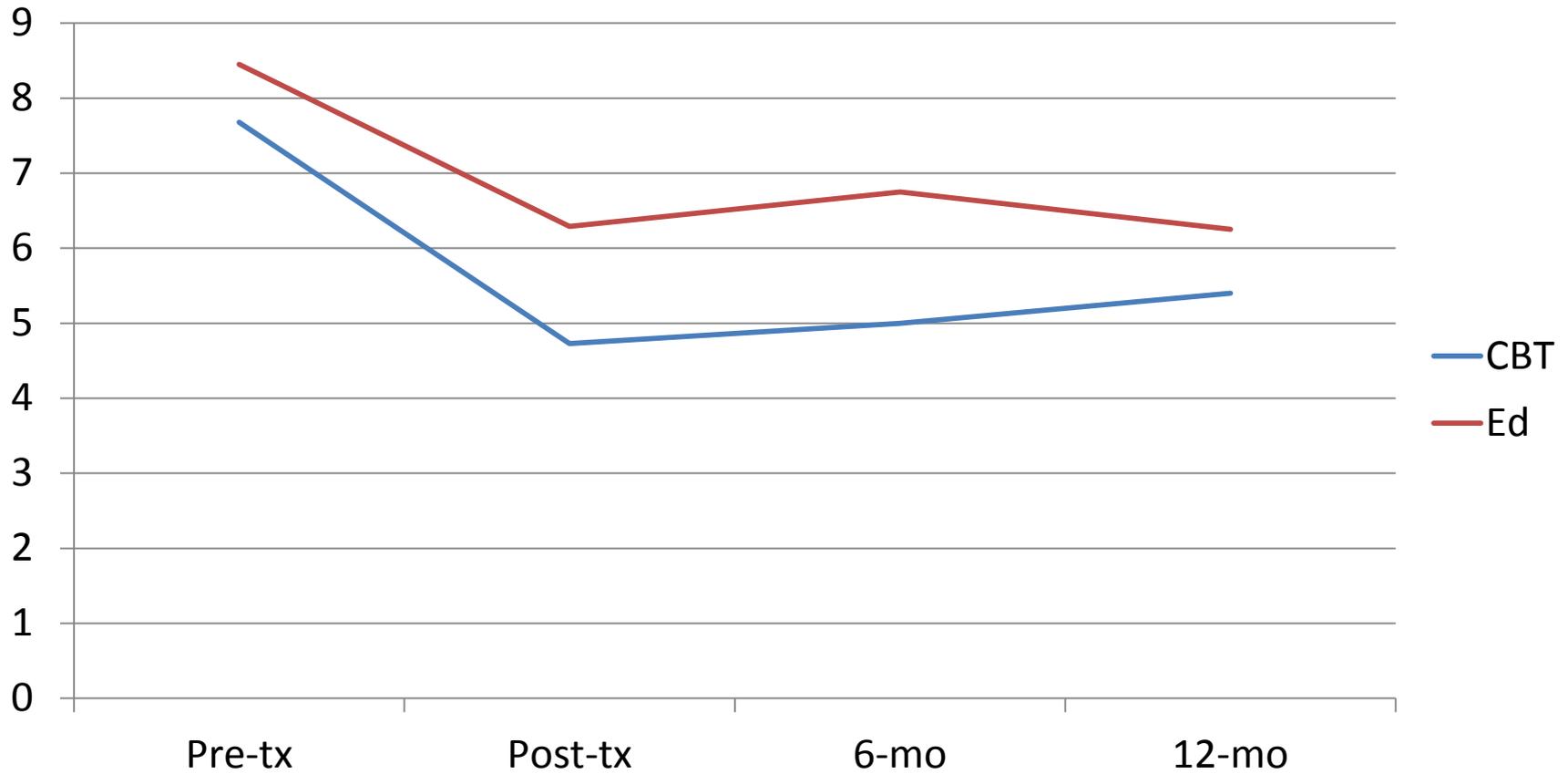
Pain Interference (BPI)



$p = .03$



Depression (PHQ-9)



$p = .03$



Treatment Satisfaction Ratings

- **Using 0 (not at all) to 10 (extremely) NRS:**
 - Helpfulness:
 - CBT: 8.6 (1.8)
 - Ed: 7.7 (2.3)*
 - Convenience (on 0-10 scale) for sample: 9.1 (1.3)
- **98% of the sample would recommend TIPS to a friend with pain and disability (no difference between groups)**

Preferred Delivery Method

“If given the choice, what is your preferred method of treatment delivery?”

- Telephone: 51.7%
- In person: 35.4%
- Web/internet: 10.2%
- Other: 2.7%
 - Skype
 - “all options”
 - “phone or internet”, “phone or in-person”
 - Texting
 - Webcam

Telephone Delivery

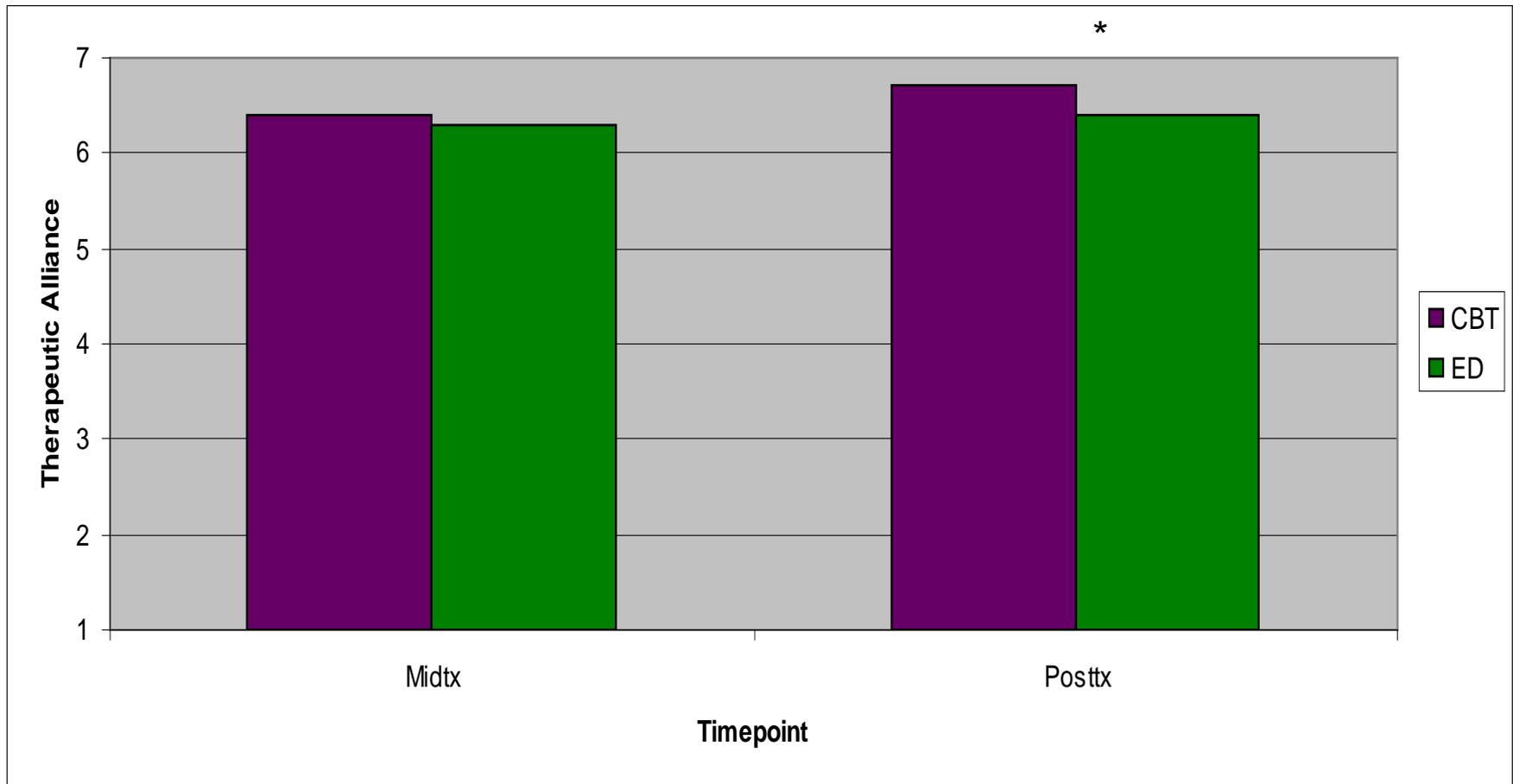
Benefits

- “Easier” & “convenient”: 53%
- No travel or driving: 47%
- Don’t have to “dress up”: 30%
- Physically more comfortable: 24%
- Other comments:
 - “Services not available in my rural, small town”
 - “I can attend sessions even if I’m not feeling well”
 - “Beats just reading about it”

Drawbacks

- None: 71%
- Not having face-to-face communication/seeing the person: 24%
- Other comments:
 - “Harder to get a connection with someone over the phone” (1 participant)
 - “Pain in neck from phone length” (1 participant)

TIPS Therapeutic Alliance



* $p=.01$

Working Alliance Inventory-Short Revised (Hatcher & Gillasp, 2005)

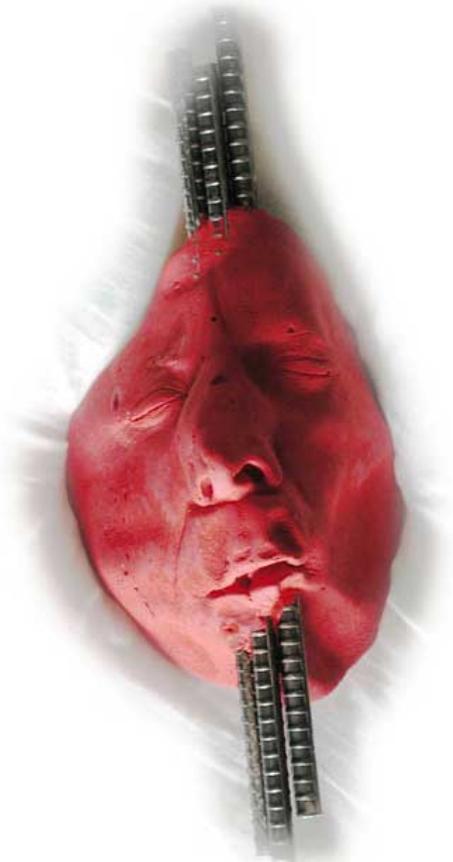


Conclusions: CBT v Ed

- Both CBT & Ed resulted in reduced pain, pain interference, & depressive symptoms
 - Approximately 30% of sample were responders
 - CBT was superior to Ed for pain interference & depression but not pain intensity
- Results are generally consistent with results from meta-analyses (e.g., Williams et al., 2012, Cochrane Review)
- Pain education is not an inert treatment

Future Directions in CBT

- Need research on how to enhance & extend the benefits of CBT and other self-management interventions
 - Mechanism research
 - Combining or tailoring treatments
 - Community-based participatory research approaches



CP III - Trapped in Hell (Mark Collen)
Plaster with rebar.
Pain Exhibit © 2011, All rights reserved.
www.PainExhibit.com

Conclusions: Telehealth

- The study supports the feasibility and acceptability of telehealth self-management in persons with LL, MS, or SCI
- Results suggest that therapeutic alliance is high and does not appear to be compromised by use of the telephone
- Telehealth interventions for chronic pain hold considerable promise for addressing issues of access

Future Directions in Disability Pain

- Continue to address the chasm between the availability & implementation of pain self-management interventions in real world settings via research on:
 - Brain injury pain in VA settings
 - Rural telehealth
 - Collaborative care



Thank you
ehde@uw.edu



Downtown Seattle from Lake Union. *Photo by Randi Blaisdell*





Long-term goals:

Remain active with my family despite my pain.

Activity/Skill	Frequency	Confidence (0-10)	Sun	Mon	Tues	Weds	Thurs	Fri	Sat
Practice relaxation	At least 1x/day	8						0	
Review my handouts	1x/week	9		0	0	0		0	0
Gardening	15 min 2x/week	7	0		0		0	0	

Using pain management skills

Obstacles	Possible solutions
1) Friday is a busy day - not sure I will have time to practice	Do extra relaxation on Saturday
2)	Do a short one that day (5 minutes)
3)	
4)	
5)	