Interdisciplinary Care in Pediatric Chronic Pain

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Efficacy: Psychological Interventions

- A large evidence-base for psychological pain management interventions for children and adolescents with chronic pain

- Updated Cochrane Systematic Review & Meta-Analysis (Eccleston, Palermo, et al., 2014)
  - 32 RCTs enrolling n=1722 patients
  - Psychological treatments are effective in pain control for children with headache at post-tx and follow-up, RR of 2.80, p<.05, **NNT = 2.69**.
  - Psychological treatments are effective in pain control for children with non-headache pain at post-treatment, SMD = -0.54, p<.05.
  - Psychological treatments are effective in improving disability for children with non-headache pain at post-treatment and follow-up, SMD = -0.24, p <.05.
Efficacy: Non-Psychological Interventions

- Limited to no data on safety or efficacy of non-psychological treatments for children and adolescents with chronic pain
  - Medications
  - Interventional procedures
  - Physical/Occupational Therapy
  - Complementary & Alternative Modalities

- No data on the efficacy of interdisciplinary pain care
  - Most RCTs of psychological treatments occur in the context of standard care in an outpatient Pain Clinic
  - No data on which components of interdisciplinary pain care are most effective
Clinical care of children and adolescents with chronic pain

- Physical and Occupational Therapy
- Pain physician
  - Medications, Interventional procedures
- Complementary and Alternative Modalities
  - Acupuncture, massage
- Pain Psychologist
  - Pain coping skills training for the child
  - Operant training for the parent
Parents

- Parent functioning is tied to child functioning and can influence pain outcomes

Palermo, Valrie, Karlson (2014)
Parent interventions

- Nothing
- Pain Education
- Operant training to change parent behavior
- No evidence-based treatment to target distress among parents of children with chronic pain
Treating parent distress: When operant training isn’t enough

- Systematic review and meta-analysis of family and parent interventions for pediatric populations (Law et al., 2014)
  - 37 RCTs enrolling n = 1079 parents of children with chronic medical conditions
  - Cognitive behavioral therapy has no effect on parent mental health, SMD = -0.14, p = 0.44.
  - Problem Solving Skills Training (PSST) is effective in improving parent mental health at post-treatment and follow-up, SMD = -0.29, p < 0.05.
Manualized intervention teaching a positive approach to handling problems and training in problem-solving skills

1. Problem Orientation
2. Problem Definition and Formulation
3. Generation of Alternatives
4. Decision Making
5. Solution Implementation
Pilot RCT of PSST for Parents of Children in Outpatient Pain Clinic

- **PSST vs. Standard Care**
  - N = 60 caregivers of children age 10-17
  - Recruited from outpatient pain clinics at SCH and OHSU
  - 4-6 sessions of PSST

- **Assessments at Pre-tx, Post-tx, 3-month follow-up**
  - Parent Problem Solving Skills (SPSI-R)
  - Parent Depression and Negative Affect (BDI, POMS)
  - Parent Stress (PSI)
  - Parental Pain Impact (BAPQ-PIQ)
  - Miscarried Helping (HHI)
  - Parent Pain Catastrophizing (PCS-P)
  - Child Pain Impact (BAPQ)
  - Child Anxiety and Depressive Symptoms (BAPQ)
  - Child Pain and Disability
Intensive Pediatric Pain Rehabilitation

- Hospital based program
  - Acute hospitalization or Day hospital program
  - 1-4 weeks

- Pain problem where intensive rehabilitation is the first line treatment (e.g., complex regional pain syndrome)

- Failed outpatient treatment
  - Severe disability
  - High psychosocial complexity
  - Other barriers
Pediatric pain rehab programs gaining popularity

- From 2010-2014, the number of intensive pediatric pain rehab programs in the United States doubled
  - 2010: 8 programs
  - 2014: 15 programs

- Similar programs for adults are disappearing

- What is different in pediatrics?
  - Typically serve small numbers of children (2-12)
  - Hospitals will pay costs not covered by insurance
  - Philanthropic program support

*American Pain Society Pediatric Pain Clinic Registry (2010-2014)*
Pediatric Pain Rehab Programs around the World

- **Similarities:**
  - Focus on functional restoration
  - No treatment for parent distress

- **Differences:**
  - Individual vs. Group
  - Narrow vs. Broad Inclusion Criteria
  - Pain Psychology Time & Orientation
  - Other treatments (Recreation therapy, nutrition counseling, etc)
Adapting PSST for Intensive Pain Rehab

- Feasibility trial with 30 parents of children (10-17 years) receiving intensive pain rehabilitation
- Recruited from pain rehab programs at three sites
  - Seattle Children’s Hospital, Boston Children’s Hospital, Mayo Clinic
- All parents receive 4-6 sessions of PSST during their child’s participation in intensive pain rehabilitation
  - 2 sessions per week, 60-90 minutes
  - In person or via telephone
Preliminary Feasibility Data

- 14 parents (10 mothers, 4 fathers)
  - Completed 1-6 sessions (M = 4.14)
  - 79% completed treatment
  - Few no shows and rescheduled sessions (range = 0-3)
  - 52% in person, 48% by phone

- Therapist ratings of parents
  - Motivated to participate (8/10)
  - Completed Homework (8/10)
  - Rapport (8/10)

- Parent satisfaction
  - $M = \frac{33}{45}; 73\%$
Discussion

- Similarities and differences in pediatric pain care vs. adult care

- Approaches to evaluating interdisciplinary treatment programs
  - Small populations at any single program
  - High variability between programs