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An Evaluation of the Effectiveness of Multidisciplinary Pain Care in Family Medicine Centers

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Chronic Pain in Primary Care

- Chronic pain is one of the most frequent presenting problems in the primary care setting.
- Prevalence rates are estimated to be between 17-20% of primary care visits.
- The impacts to the individual patient includes impaired functioning, psychological distress, risk for medication misuse and/or abuse, disengagement from valued-life activities, and reduced quality of life.
- The prevalence of high-impact chronic pain is between 10-20% of adults with chronic pain.

Pitcher et al, (2018), *The Journal of Pain*, 1-15

Williams, (2010), In Suls, Davidson, & Kaplan, *Handbook of Health Psychology and Behavioral Medicine*


Goal and Scope of Study

- Primary care physicians often report that treating chronic pain is outside their scope of practice and confidence.
- The absence of imbedded behavioral health services is a significant frustration voiced by primary care physicians.
- The present investigators studied the effectiveness of an evidence-based behavioral health intervention for chronic pain that was provided on site in two family medicine centers.
- Acceptance-commitment therapy (ACT) is an evidence-based behavioral health treatment for chronic pain.
- ACT was provided in a group format in two family medicine centers and compared to usual care for adult patients with chronic pain in a randomized control trial.

Results and Discussion


- One hundred twenty-nine patients were consented.
- The efficacy of the 6-week ACT groups was compared to the usual-care condition at baseline and after 5 months.
- Patients with chronic pain participating in the ACT group in a family medicine clinic demonstrated significant change compared to usual care in pain acceptance (e.g., willingness to engage in activities despite pain) after 5 months despite 31% of the patients in the treatment condition not attending any sessions and a sizeable number not attending all treatment sessions.
- Large patient attrition reflects the challenge of engaging patients with chronic pain in nonpharmacological interventions.
- Future research should explore ways of integrating behavioral health interventions into primary care settings in ways that maximize patient engagement.

Summary of Study and Outcomes



Group Acceptance and Commitment Therapy for Patients with Chronic Pain in A Primary Care Clinic

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Introduction

- Acceptance and Commitment Therapy (ACT) is an effective non-pharmacological intervention for improving the coping effectiveness of patients with chronic pain.
- Prior studies showed ACT to be effective for outcomes such as quality of life, depression, and pain in patients with chronic pain.
- Objective of the study: to reduce the level of pain-related impairment and improve acceptance of pain among patients with chronic pain.
- Randomized controlled trial that compared the effectiveness of two different approaches to treating chronic pain in the primary care setting.
 - ACT group sessions
 - Standard care extended by provider education only

Methods

Participants

- We recruited 129 patients with chronic pain from a large academic Family Medicine Center.
- Participants were randomized using block randomization with blocks of varying size using SAS 9.3 to perform the randomization to either a control group (n = 66) or an intervention group (n = 63).
- Inclusion Criteria:
 - Adults over age 18 with chronic pain for 3+ months
 - Score > 20 on the combined Negative Affect and Fear Scales of the Pain Outcome Questionnaire.
 - Able to sign consent to participate in the study
- Exclusion Criteria:
 - Pregnant patients
 - Currently being seen by a psychiatrist or behavioral health professional
 - Participating in another clinical trial
 - Actively involved in workmen's compensation or litigation

Procedure

- Intervention: six-90 minute consecutive weekly sessions of group-based ACT led by a licensed psychologist or advanced graduate students.
- Outcome Variables: level of pain-related impairment, acceptance of pain, committed action despite pain.
- Self-report measures completed at:
 - Baseline
 - Follow-up:
 - Intervention: 5 months after start of the intervention
 - Control: 5 months after baseline

Measures

- Pain Outcome Questionnaire – Short Form (POQ-SF)
- Chronic Pain Acceptance Questionnaire – 8 (CPAQ-8)
- Committed Action Scale-8 (CAQ-8)

Results

Data Analyses

- A complete case analysis was used for this comparison.
- Comparison of change between groups:
 - Wilcoxon Rank Sum test for POQ and CPAQ
 - Two-sample T test for CPAQ

Results

- Approximately 50% of participants completed the follow-up questionnaires.

Table 1. Study Participants Characteristics

Characteristic	Control group N = 66	Study group N = 63	p-value
Age – years	47.24 (±13.03)	49.54 (±13.08)	0.32
Mean years of pain duration	5.24 (1.72-9.33)	5.19 (2.12-11.62)	0.78
Female gender	46 (70%)	48 (76%)	0.41
Race			
Caucasian	51 (77%)	47 (75%)	0.84
African American	15 (23%)	15 (24%)	
Asian	0 (0%)	1 (2%)	
Work Status			
Disabled	30 (45%)	23 (37%)	0.38
Full-time	11 (17%)	11 (17%)	
Homemaker	3 (5%)	8 (13%)	
Part-time	5 (8%)	6 (10%)	
Retired	3 (5%)	6 (10%)	
Unemployed	14 (21%)	9 (14%)	
Surgical intervention	40 (61%)	49 (78%)	0.04
Smoking status			
Current	21 (32%)	21 (35%)	0.61
Former	24 (36%)	18 (29%)	
Never	21 (32%)	24 (38%)	
Mental Health Diagnosis	44 (67%)	43 (68%)	0.85

Table 2. Number of Sessions Attended by the Study Group Participants

Number of Sessions attended	N (%)
0	20 (32)
1-2	15 (24)
≥ 3	28 (44)

Table 3. Summaries of Change (Baseline to 5 months) Within a Study Groups

Measure	Study (n = 31-33)	P-value study	Control (n = 32-34)	P-value control*
Total POQ	5.5 (-1, 21)	0.09	-2 (-13, 10)	0.7
Total CAQ	-2 (-6, 1)	0.18	0 (-4, 4)	0.74
Total CPAQ	-4.33 (8.14)	0.005	1.88 (7.53)	0.17

* p-value for POQ and CAQ are based on Wilcoxon Rank sum test

Table 4. Comparison of Change (Baseline to 5 months) Between Groups

Measures	P-value	Difference in mean change	95% CI
Total POQ	0.06		
Total CAQ	0.37		
Total CPAQ	0.002	6.21	(2.32, 10.1)
Activity Engagement (1,2,3,5,6,8)	0.007	3.39	(0.96, 5.83)
Pain Willingness (4,7)	0.07	2.39	(-0.20, 4.99)

Discussion

- Patients with chronic pain participating in an ACT group in a primary care clinic demonstrated significant change in pain acceptance after five months. This was achieved despite the fact that most participants did not attend all 6 sessions.
- A one or two ACT group session for patients with chronic pain may be beneficial if the core principles can be covered during these sessions.
- There was no change in pain severity or functional interference.
- Large participant attrition reflects the difficulty of engaging patients with chronic pain in nonpharmacological therapy.
- Future research should explore ways of integrating behavioral health interventions into primary care settings in ways that maximize patient engagement.

