

The Use of Dialectical Behavioral Therapy (DBT) and Physical Therapy (PT) as Treatment for Chronic Pain: a Case Series

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Abstract

- Previous research on treatment for symptoms of chronic pain has focused on the independent use of physical therapy (PT) or psychological therapies. These types of interventions have demonstrated mild to moderate effectiveness.
- To this date, there is minimal research on the combination of psychological therapy and physical therapy to treat this population. Currently, there is no research on the use of Dialectical Behavioral Therapy (DBT) to treat symptoms of chronic pain.
- The current study examined possible differences in participant characteristics of individuals suffering from chronic pain who attend PT along with DBT compared to those attending DBT alone.

Purpose

- *THE PURPOSE* of the current study is to determine if there is a difference in participant characteristics of individuals suffering from chronic pain who attend physical therapy along with Dialectical Behavioral Therapy compared to those attending Dialectical Behavioral Therapy alone.
- *THE HYPOTHESIS* is that there will be differences in outcome measures of individuals who attend both physical therapy and Dialectical Behavioral Therapy versus Dialectical Behavioral Therapy alone.

Methods and Materials

The study is a cohort design study. Patients were recruited from the THRIVE program at Mental Health Systems which is a group psychological DBT program for individuals experiencing chronic pain. Patients completed monthly forms that included demographic information, Numerical Pain Rating (NPR), Pain Disability Index (PDI), Pain Self-Efficacy Questionnaire (PSEQ), Tampa Scale of Kinesiophobia (TSK), Patient Global Impression of Change (PGIC). The participants were expected to complete forms each month for 4 months, or until discharge from the THRIVE program.

Discussion

The data from four participants was analyzed in this study, with three individuals attending PT and DBT, while one attending DBT alone. In the PT + DBT group, improved scores demonstrated MCID or MDC with the PSEQ-2, average pain, and worst pain of the first participant, PDI, TSK, average pain, and worst pain of the second participant, and average pain and worst pain of the third participant. The DBT alone participant had an improved worst pain score that demonstrated a MCID.

Limitations:

- Participants were not randomized to either the PT + DBT group or DBT alone group.
- There was a small sample size of only 6 participants, of which data from only 4 participants was analyzed. Reasons for low participation include attendance and discharge concerns in the THRIVE program, and patients took medical leave during the time the study was being performed.
- The THRIVE program was not a strict DBT group and did include some aspects of CBT.
- The researchers were not directly involved in the recruitment of participants and the administration of the outcome forms.

Introduction

Symptoms Correlated with Chronic Pain:

- **Somatic:** Pain, Muscle tightness, Movement dysfunction, Inactivity, Fatigue, Sleep difficulties
- **Psychosocial:** Nervousness/anxiety, Difficulty concentrating, Depression, Relationship distress/social role loss, Isolation, Overuse of medication, Fear of movement/movement rated as threatening, Decreased quality of life

Research on Physical Therapy with Chronic Pain:

- Research has demonstrated that exercise is most often associated with improvements with a variety of chronic pain conditions, including chronic low back pain, osteoarthritis, and fibromyalgia
- Pain neuroscience education is associated with improvements with pain, disability, pain catastrophizing, and kinesiophobia

Psychological Treatment for Chronic Pain:

- **Cognitive Behavioral Therapy (CBT):** Effective in reducing anxious thinking about pain and experiencing future pain, but minimal reduction in physical pain symptoms and disability scores
- **Acceptance and Commitment Therapy (ACT):** Improves pain acceptance, psychological flexibility, function, anxiety, depression, physical wellbeing and quality of life
- **Mindfulness Meditation:** Significant reduction in depression and improves mental health quality of life
- **Mindfulness-Based Stress Reduction Therapy (MBRT):** Improves physical function, pain intensity, and depression

Dialectical Behavioral Therapy (DBT):

- Effective with treating Borderline Personality Disorder, Substance Dependence, Depression, PTSD, eating disorders
- Currently, there are no research studies investigating the use of DBT as an intervention for chronic pain.

Results

There were six participants in the study, four of which participated in the study for more than one month. Three participants attended PT along with the DBT program, and one participant only attended the DBT program. One participant from the PT + DBT demonstrated a minimally clinically important difference (MCID) with improved PDI scores. One participant from the PT + DBT group had an improved TSK change score that demonstrated a minimal detectable change (MDC). One participant from the PT + DBT group demonstrated a MCID for improvement in the PSEQ-2 score. No changes within the PGIC scores demonstrated a MCID or MDC. Average pain demonstrated a MCID for all three PT+DBT participants and worst pain scores demonstrated a MCID for all four participants.

Table 1. Raw scores and change values for all participants

Subjects	PDI			TSK			PSEQ-2			PGIC - Question 1			PGIC - Question 2			Average Pain			Worst Pain		
	Baseline	Final	Change	Baseline	Final	Change	Baseline	Final	Change	Baseline	Final	Change	Baseline	Final	Change	Baseline	Final	Change	Baseline	Final	Change
Subject A - PT + DBT	41	49	+8	42	40	-2	0	3	+3*	5	7	+2	3	2	-1	7.5	6	-1.5*	9	10	+1*
Subject B - PT + DBT	48	38	-10*	50	40	-10*	6	5	-1	6	6	0	2	1	-1	4	3	-1*	5	4	-1*
Subject C - PT + DBT	52	48	-4	31	36	+5	4	5	+1	2	5	+3	3	7	+4	5	4	-1*	9	8	-1*
Subject D - DBT alone	25	18	-7	30	30	0	4	5	+1	4	4	0	6	6	0	3	3	0	5	4	-1*

*Indicates minimally clinically important difference (MCID)
 +Indicates minimal detectable change (MDC)

Conclusions

Literature demonstrates that physical therapy and psychological treatments are effective with treating symptoms of chronic pain.

Future Directions

More research is needed with sufficient participants in order to obtain sufficient data to determine whether the addition of DBT to PT results in improved outcomes.

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A full list of references can be provided upon request

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