FINAL REPORT

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

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ABSTRACT

Introduction: Family medicine physicians frequently treat patients with chronic pain. These patients commonly report significant interference with enjoyment of life and engagement in daily activities. Decreasing this interference through behavioral health interventions can be an important feature of integrated care. Acceptance and Commitment Therapy (ACT) is an effective treatment for increasing patient engagement in valued life activities. Therefore, ACT is an appropriate integrated care option for the primary care setting.
Method: This is a randomized controlled trial that evaluated a group-based ACT program for patients with chronic pain provided in an academic family medicine center. Patients were randomly assigned to one of two groups: an on-site intervention group which offered six 90-minute weekly sessions of group-based ACT for patients led a psychologist or psychology practicum student (treatment group) or usual care group (control group). We consented 129 study participants into the study: 63 in the treatment group and 66 in the control group. Participants completed self-report measures at baseline and at three months following the completion of the intervention, or after 5 months from baseline for the control condition. We compared change scores in the two groups for the following measures: Pain Outcomes Questionnaire (POQ-19SF), Chronic Pain Acceptance Questionnaire (CPAQ-8), and Committed Action Questionnaire (CAQ-8).
Results. Twenty (31.7%) participants in the treatment group did not attend any treatment sessions, 15 attended 1 or 2 and 28 attended at least 3 sessions. Approximately 50% of participants completed the 3-month follow-up questionnaires. On the CPAQ-8 the study group showed significantly ($p=0.002$) greater mean improvement (4.3) than the control group (-1.9). There was no significant difference between groups in change scores on the POQ-19SF ($p = 0.06$) or the CAQ-8 ($p = 0.37$).
Discussion: Patient with chronic pain participating in an ACT group in a primary care clinic demonstrated significant change in pain acceptance after 5 months. Large participant's 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.

PURPOSE

The goal of this study was to evaluate the effectiveness of an on-site evidence-based nonpharmacological pain management intervention in a primary care center on reducing self-reported impairment and psychological distress among adult patients presenting with chronic pain conditions.

SCOPE

Chronic pain is one of the most frequent presenting problems in a primary care setting (Mills et al, 2016). The prevalence of chronic pain is estimated to be between 15-20 % in adults and accounts for 17% of primary care physician office visits (Williams, 2010). The costs to the individual patient include impaired functioning, psychological distress, risk for medication misuse and abuse, disengagement from valued-life activities, and reduced quality of life. Patients with persisting pain are at risk for developing a chronic-pain disability syndrome (Gamborg, Elliot & Curtis, 1991). This syndrome is characterized by disproportionate levels of pain-related interference with functioning and enjoyment of life.

Without early invention from an integrated team of healthcare providers, patients with persisting pain may drift into a pattern of avoidant-coping responses and pain-related distress. There are a number of psychological factors that increase the risk for this pain-related interference with activities and enjoyment of life. In 2011, the U.S. Surgeon General emphasized the importance of early intervention in healthcare to prevent the accumulation of medical, psychosocial, functional, and financial costs associated with the progress of chronic health conditions like chronic pain. Therefore, early detection of increasing disability from chronic pain and initiating best-practice care should occur in the primary care physicians office. Primary care physicians often start the process of addressing persisting pain by making referrals for physical therapy and/or to a pain clinic. While these referrals are helpful, the treatments may not address some of the patient's psychological reactions to the pain. Additionally, the rate of follow through with externally-based behavioral services has been found to be less than adequate (Auxier et al, 2012).

There is strong evidence that coordinated care among team members of different disciplines can improve outcomes for patients with chronic pain (Gatchel et al, 2014). While primary care physicians are involved in the diagnosis and treatment of patients with chronic pain, standard care often dictates that many of the nonpharmacological treatment components are located off site or are offered on a case-by-case basis. With the advent of the medical-home model for primary care there has been a movement towards co-locating multidisciplinary care, such that multiple services are offered in one setting. There is evidence that having all members of the pain-care team located in the same clinic setting leads to improved access, increased quality and in some cases decreased cost of care (Auxier et al,. 2012).

Primary care physicians report that having on-site behavioral health resources would improve their capacity to effectively treat patients with chronic pain who have higher-impact conditions. The goal of this study was to compare the effectiveness of a brief acceptance and commitment therapy regimen to usual care for the treatment of chronic pain in a primary care setting. Treatment effectiveness was viewed through the lens of improvement in self-reported functional interference, pain severity, pain acceptance and commitment to valued activities despite pain.

METHODS

We recruited 129 patients with chronic pain from a large academic family medicine center. The physicians in these family medicine centers received 2 hours of training in the importance of integrating pharmacological and nonpharmacological pain management. In addition, opioid sparing strategies in the management of chronic pain was covered in these training sessions. Participants were randomized using block randomization with blocks of varying size using SAD 9.3 to perform randomization to either a control group (n=66) or an intervention group (n=63). Inclusion criteria included: a) adults over 18 years old with chronic pain for more than 3 months, b) a score of greater than 20 on the combined negative affect and fear scales of the Pain Outcome Questionnaire, and c) able to sign consent to participate in the study. Exclusion criteria included: a) pregnant patients, b) currently being seen by a psychiatrist or behavioral health professional, c) participating in another clinical trial, or d) actively involved in workmen's compensation or litigation related to their pain condition.

Patients in the intervention group received six 90-minutes weekly sessions of group-based Acceptance and Commitment Therapy (ACT). ACT is an evidence-based treatment that guides patients towards greater psychological flexibility (McCracken & Vowles, 2014). Psychological flexibility is a term employed to describe an individual's ability to be present with their experience (for example, chronic pain) with less judgement and reactivity, to not become entangled in unhelpful thoughts about the past or future, to free oneself from the restraints of a rigid self-image, and to be willing to live a fuller life in the pursuit of one's values despite the presence of emotional or physical pain. The groups were led by clinical psychologists or advanced graduate students.

Outcome variables included level of pain-related impairment (e.g. severity, vitality, strength, distress and fear), acceptance of pain (e.g. willingness to experience pain and activity engagement), and committed action (e.g. engaging in valued activities) despite pain. Pain-related impairment was measured by the Pain Outcome Questionnaire-Short Form (POQ-SF). Acceptance of pain was measured by the Chronic Pain Acceptance Questionnaire-8 (CPAQ-8). Committed action was measured by the Committed Action Questionnaire (CAQ).

RESULTS

A complete case analysis was used for the comparison between the control and treatment conditions. Data analysis was conducted using comparison of change between these conditions at baseline and at a 5-month follow-up period. Based on the distribution of scores, the Wilcoxon Rank Sum test was used for the POQ and CAQ and a two-sample T test was used for the CPAQ. Twenty (31.7%) participants in the treatment group did not attend any treatment sessions, 15 attended 1 or 2 and 28 attended at least 3 sessions. Approximately 50% of participants completed the 3-month follow-up questionnaires. On the CPAQ-8 the study group showed significantly ($p=0.002$) greater mean improvement (4.3) than the control group (-1.9). There was no significant difference between groups in change scores on the POQ-19SF ($p = 0.06$) or the CAQ-8 ($p = 0.37$).

DISCUSSION

Patients with chronic pain participating in an ACT group in a primary care clinic demonstrated significant change in pain acceptance (e.g. their willingness to try to engage in more valued activities despite pain) after five months. This was achieved despite the fact that most of the participants did not attend all 6 sessions. There was no change in self-reported pain severity or functional interference.

The large participant attrition in this study reflects the difficulty of engaging patients with chronic pain nonpharmacological therapy. In a recent meta-analysis summarizing 669 studies and 83,834 clients pointed to attrition ratings from behavioral health interventions ranging from 18% when measured by a predetermined number of sessions to nearly 40% when measured by clinician report (Swift & Greenberg, 2012). Thus, the level of attrition encountered in this study is not uncommon. Perhaps a brief intervention—one or two ACT groups sessions for patients with chronic pain may be beneficial if the core principles can be covered during these sessions. Future research is needed to explore ways of integrating behavioral health interventions into primary care settings in ways that maximize patient engagement.

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LIST OF PUBLICATIONS

Hillenberg, J.B., Slavin-Spenny, O. M., Black, M. & Mulhem, E. (2018). *Group acceptance and commitment therapy for patients with chronic pain in a primary care clinic.* Presented at the Annual Meeting of the Midwest Pain Society.

Jasinski, M. J., Slavin-Spenny, O. M., Hillenberg, J. B., Mulhem, E. & Stevenson, A. (2016). *Predictors of attrition from a behavioral medicine treatment for chronic pain in a primary care setting.* Presented at the Annual Meeting of the Midwest Pain Society