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Is Tai Chi Acceptable for Improving Health Outcomes in Opioid-Use-Disordered Patients Receiving Outpatient Medication-Assisted Treatment?

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Purpose: This study examined the feasibility of conducting a Tai Chi (TC) exercise study to improve health outcomes in patients with opioid use disorder (OUD) who were receiving outpatient medication-assisted treatment (MAT) with methadone (MTD) or buprenorphine/naltrexone (BUP) at the time of investigation.

Methods: This study was an anonymous survey study. Questionnaire was distributed to OUD patients enrolled in the Center for Addiction Services and Treatment – a MAT clinic at the University of Arkansas for Medical Sciences. The investigator-designed questionnaire included questions regarding demographics, opioid abuse and treatment history, physical and mental health, pain, and interest in joining a TC exercise program. Descriptive statistics, t-test, Mann-Whitney U test, chi-square and correlations were used to describe the results.

Results: This study recruited 98 patients, of which 41% and 58% were enrolled in the MTD and BUP programs, respectively. Compared to BUP patients, on a 6-point scale, MTD patients tended to have worse physical conditions (e.g., ability to perform vigorous activities: 0.85 points higher, CI 95%: 0.111, 1.585) but similar levels of pain (0.1 points higher, CI 95%: -0.524, 0.693) and mental health (e.g., anxiety level: 0.1 points lower, CI 95%: -0.731, 0.456).

Overall, 40%, 50%, 56% and 59% of patients reported at least a moderate level of interest in TC for easing mental problem, easing sleep problem, easing pain and improving physical fitness, respectively. MTD and BUP patients were similar in reporting at least moderate levels of interest in TC for easing mental problems (53% vs. 32%, $p=.063$), easing sleep problems (55% vs. 46%, $p=.482$), easing pain (60% vs. 53%, $p=.609$) and improving physical fitness (63% vs. 56%, $p=.677$).

However, when examining the average score of interest in TC for health outcomes, relative to BUP patients, MTD patients showed higher levels of interest in TC exercise for improving physical fitness by 0.9 points (CI 95%: 0.216, 1.487), easing mental problems by 0.9 points (CI 95%: 0.285, 1.500), and easing sleep problems by 0.8 points (CI 95%: 0.111, 1.403). BUP and MTD patients were not dissimilar in their interest in TC for easing pain, a common problem among OUD patients, with MTD patients 0.6 points (CI 95%: -0.054, 1.267) higher than BUP patients. Finally, the interest scores were highly associated with each other, with Spearman correlations ranging from .763 to .797 ($ps < .001$).

Conclusion: MTD patients had worse physical health but similar level of pain and mental health. At least 40% of all participants surveyed were at least moderately interested in practicing TC for health benefits. Pain and physical fitness were the top two health outcomes sought by patients when considering the use of TC. Therefore, TC may serve as an alternative therapy for improving health outcomes in OUD patients receiving outpatient MAT.

Title:

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Keywords:

Health outcomes, Opioid use disorder and Tai Chi

Abstract Summary:

This study examined characteristics of patients with opioid use disorder (OUD) who were receiving outpatient medication-assisted treatment (MAT) with methadone (MTD) or buprenorphine/naltrexone (BUP) at the time of investigation and investigated their level of interest in Tai Chi (TC) exercise for improving health outcomes.

References:

- U.S. Department of Health and Human Services, HHS Acting Secretary Declares Public Health Emergency to Address National Opioid Crisis. 2017.
- Council of Economic Advisers, The Underestimated Cost of the Opioid Crisis, E.O.o.t.P.o.t.U. States, Editor. 2017, Executive Office of the President of the United States: Washington, DC.
- Hedegaard, H., A.M. Miniño, and M. Warner, Drug Overdose Deaths in the United States, 1999–2017. NCHS Data Brief, 2018(329): p. 1-8.
- Saxon, A.J. and E.F. McCance-Katz, Some Additional Considerations Regarding the American Society of Addiction Medicine National Practice Guideline for the Use of Medications in the Treatment of Addiction Involving Opioid Use. J Addict Med, 2016. 10(3): p. 140-2.
- Hser, Y.I., et al., Treatment retention among patients randomized to buprenorphine/naloxone compared to methadone in a multi-site trial. Addiction, 2014. 109(1): p. 79-87.

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