



Tele-ACT and Recreational Therapy: Adapting Acceptance and Commitment Therapy for Telehealth Delivery to Support People with Chronic Pain During the COVID-19 Pandemic

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Introduction

- Chronic pain is a public health problem that impacts around 11-40% of people in the US.¹
- Because the pain experience is influenced by biological, social, psychological, and environmental factors, interdisciplinary pain management is recognized as best practice.²
- Acceptance and Commitment Therapy (ACT) has been found to lead to improved health outcomes for people with chronic pain.³
- Although there is limited research in the area, previous findings suggest that ACT delivered via videoconferencing can be as effective as ACT delivered in-person.⁴
- Health-related and social impacts of the COVID-19 pandemic created unique challenges for people with chronic pain.^{5, 6, 7}
- Combining principles of ACT and recreational therapy allows participants to apply ACT concepts and skills to their environment and lifestyle.

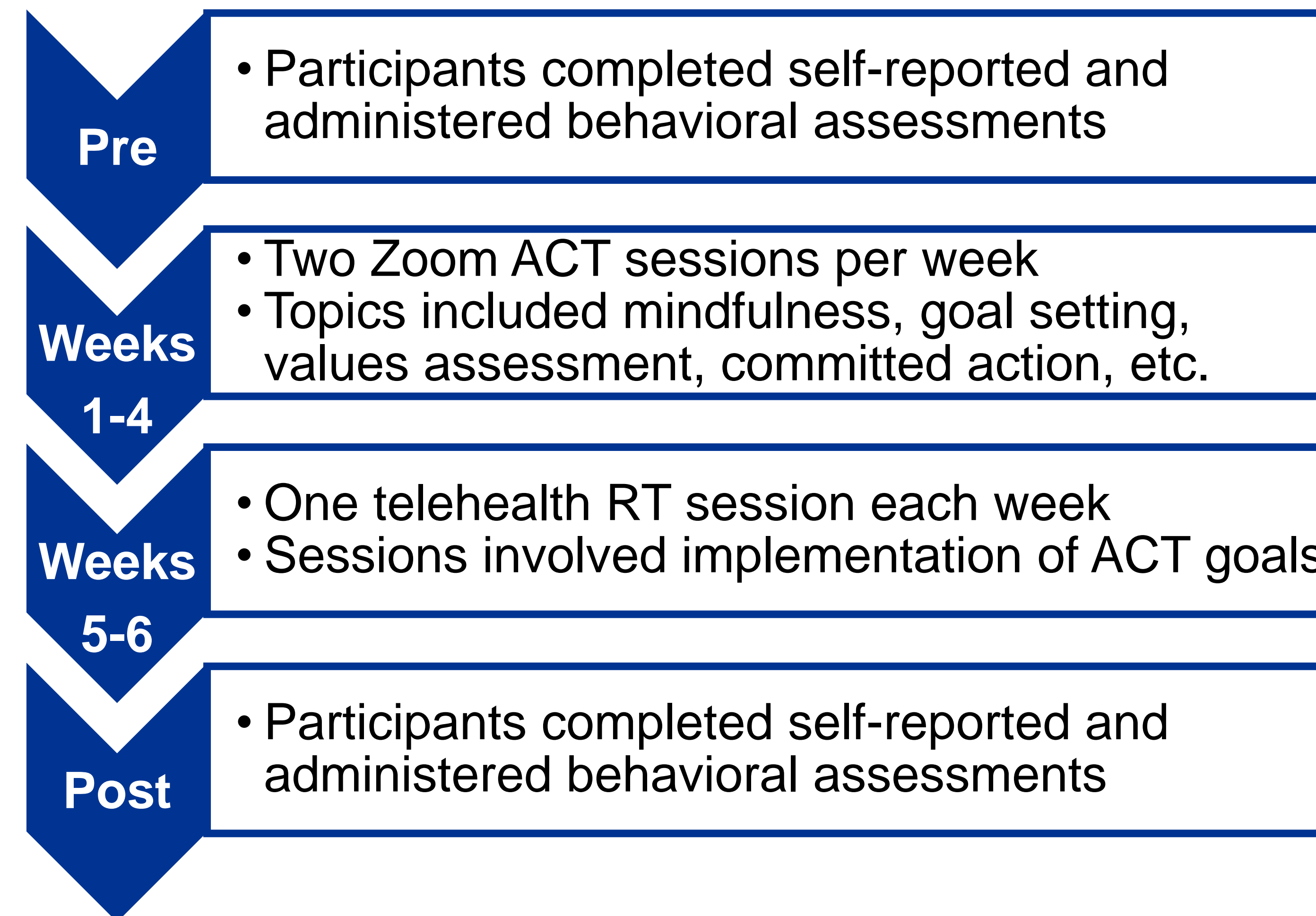
Purpose

- To test the feasibility and efficacy of the delivery of ACT with a recreational therapy component by Certified Recreational Therapy Specialists (CRTS) via telehealth.
- To derive lessons for telehealth practice that can inform future studies of this nature and the delivery of group mental health services such as ACT via telehealth.

Methods

- Participants (N = 7) attended Zoom ACT and recreational therapy sessions conducted by a CRTS trained in ACT.
- Participants' conditions contributing to chronic pain included fibromyalgia, osteoarthritis, compression fractures, and musculoskeletal pain.
- Participants ranged in age from 24-88 years old, with five participants 76 or older.
- We analyzed results from validated assessment tools using SAS 9.4 and AI-Therapy Statistics Beta.
- We calculated descriptive statistics, then conducted the Shapiro-Wilk test of normality, paired-*t* test, Wilcoxon signed-rank test. In addition, we calculated effect size using Cohen's *d*. Finally, we completed correlation and regression analysis.

The Intervention



Results

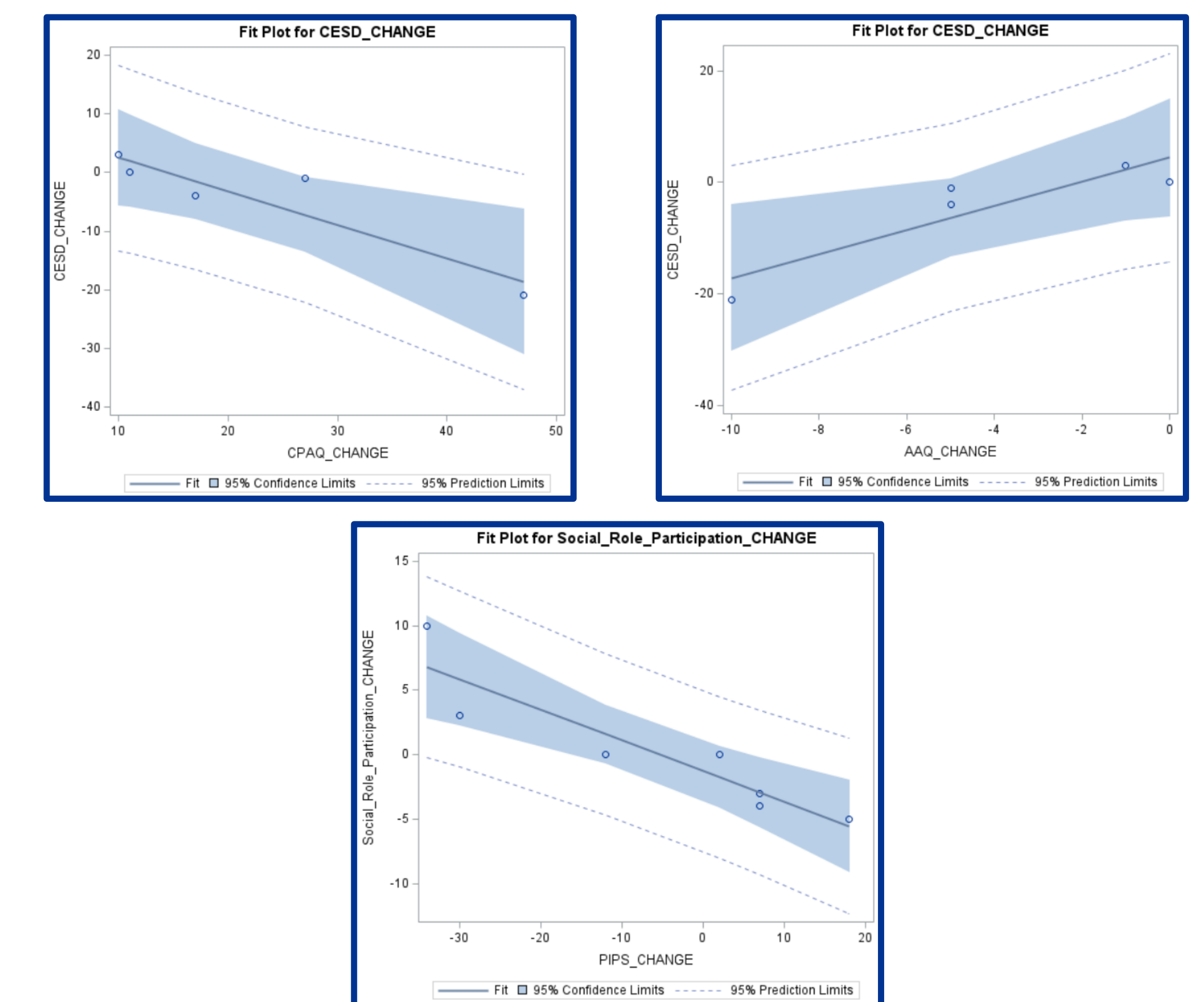
Measure	Mean Change Score	Standard Deviation	p Value	Effect Size (Cohen's d)
Acceptance and Action Questionnaire II (AAQ-II)	-4.2	3.96232255	0.0768*	0.004
Chronic Pain Acceptance Questionnaire (CPAQ)	22.4	15.323185	0.0308**	0.374
CPAQ, Activity Engagement	11.2	9.54986911	0.0586*	0.334
CPAQ, Pain Willingness	11.2	6.09918027	0.0148**	0.388
NeuroQoL Lower Extremity Function	2	2.5819889	0.0863*	0.396
NeuroQoL Stigma	-3.2857143	4.15187852	0.0812*	0.87

Note: * = significant at p < 0.1, ** = significant at p < 0.05

- Statistically significant improvements were observed for the AAQ-II, CPAQ (all domains), NeuroQoL Lower Extremity Function, and NeuroQoL Stigma.
- No significant changes were observed for other measures including psychological inflexibility measured by the Psychological Inflexibility in Pain Scale (PIPS), depression, anxiety, cognitive function, social role satisfaction and participation, sleep disturbance, fatigue, and other measures.

Correlations

Measure 1	Measure 2	r	p Value
Acceptance and Action Questionnaire II (AAQ-II)	Center for Epidemiological Studies Depression (CES-D)	0.89901	0.0379
Chronic Pain Acceptance Questionnaire (CPAQ)	Center for Epidemiological Studies Depression (CES-D)	-0.92164	0.026
Psychological Inflexibility in Pain Scale (PIPS)	NeuroQoL Social Role Participation	-0.91678	0.0037



Discussion and Lessons for Practice

- Tele-ACT with recreational therapy was associated with improvements in chronic pain acceptance and psychological flexibility along with reduced stigma.
- Higher pain acceptance and psychological flexibility were associated with lower levels of depression.
- Lower psychological inflexibility was associated with higher participation in social roles.
- Participants were overall satisfied with the telehealth modality
- ACT and recreational therapy can be effectively delivered via telehealth, but support with technology may be required for specific populations to maximize accessibility.

(1) Institute of Medicine (US) Committee on Advancing Pain Research, Care, and Education. Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education, and Research. Washington (DC): National Academies Press (US); 2011. PMID: 22553896 (2) Gatchel, R. J., PhD, ABPP, Howard, K. J., & PhD. (n.d.). The Biopsychosocial Approach. Practical Pain Management. Retrieved October 8, 2021, from <https://www.practicalpainmanagement.com/treatments/psychological/biopsychosocial-approach> (3) Feliu-Soler, A., Montesinos, F., Gutiérrez-Martínez, O., Scott, W., McCracken, L. M., & Luciano, J. V. (2018). Current status of acceptance and commitment therapy for chronic pain: a narrative review. *Journal of pain research*, 11, 2145–2159. <https://doi.org/10.2147/JPR.S144631> (4) Herbert, M., Afari, N., Liu, L., Heppner, P., Rutledge, T., Williams, K., Eraly, S., VanBuskirk, K., Nguyen, C., Bondi, M., Atkinson, J., Golshan, S., & Wetherell, J. (2016). Telehealth versus In-Person Acceptance and Commitment Therapy for Chronic Pain: A Randomized Non-Inferiority Trial. *The Journal of Pain*, 18. <https://doi.org/10.1016/j.jpain.2016.10.014> (5) Alonso-Matielo, H., da Silva Oliveira, V. R., de Oliveira, V. T., & Dale, C. S. (2021). Pain in Covid Era. *Frontiers in Physiology*, 12, 39. <https://doi.org/10.3389/fphys.2021.624154> (6) Eccleston, C., Blyth, F. M., Dear, B. F., Fisher, E. A., Keefe, F. J., Lynch, M. E., Palermo, T. M., Reid, M. C., & Williams, A. C. de C. (2020). Managing patients with chronic pain during the COVID-19 outbreak: Considerations for the rapid introduction of remotely supported (eHealth) pain management services. *Pain*, 161(5), 889–893. <https://doi.org/10.1097/j.pain.0000000000001885> (7) Ghai, B., Malhotra, N., & Bajwa, S. S. (2020). Telemedicine for chronic pain management during COVID-19 pandemic. *Indian Journal of Anaesthesia*, 64(6), 456. https://doi.org/10.4103/ija.IJA_652_20