

University of Vermont

UVM ScholarWorks

Public Health Projects, 2008-present

Public Health Projects, University of Vermont
College of Medicine

2021

Analyzing the Outcomes of a Comprehensive Pain Management Program

Alia Johnson
University of Vermont

Joshua Kohan
Larner College of Medicine

Cole Lutz
University of Vermont

Patrick McClurg
The University of Vermont

Grace Merritt

See next page for additional authors

Follow this and additional works at: https://scholarworks.uvm.edu/comphp_gallery



Part of the [Community Health and Preventive Medicine Commons](#), and the [Health Services Research Commons](#)

Recommended Citation

Johnson, Alia; Kohan, Joshua; Lutz, Cole; McClurg, Patrick; Merritt, Grace; Sahene, Warrick; and Tang, Katie, "Analyzing the Outcomes of a Comprehensive Pain Management Program" (2021). *Public Health Projects, 2008-present*. 307.

https://scholarworks.uvm.edu/comphp_gallery/307

This Book is brought to you for free and open access by the Public Health Projects, University of Vermont College of Medicine at UVM ScholarWorks. It has been accepted for inclusion in Public Health Projects, 2008-present by an authorized administrator of UVM ScholarWorks. For more information, please contact schwrrks@uvm.edu.

Authors

Alia Johnson, Joshua Kohan, Cole Lutz, Patrick McClurg, Grace Merritt, Warrick Sahene, and Katie Tang



“Analyzing The Outcomes of a Comprehensive Pain Management Program”

Alia Johnson, Joshua Kohan, Cole Lutz, Patrick McClurg, Grace Merritt, Warrick Sahene, Katie Tang, & Cara Feldman-Hunt
UVM Medical Center Comprehensive Pain Program

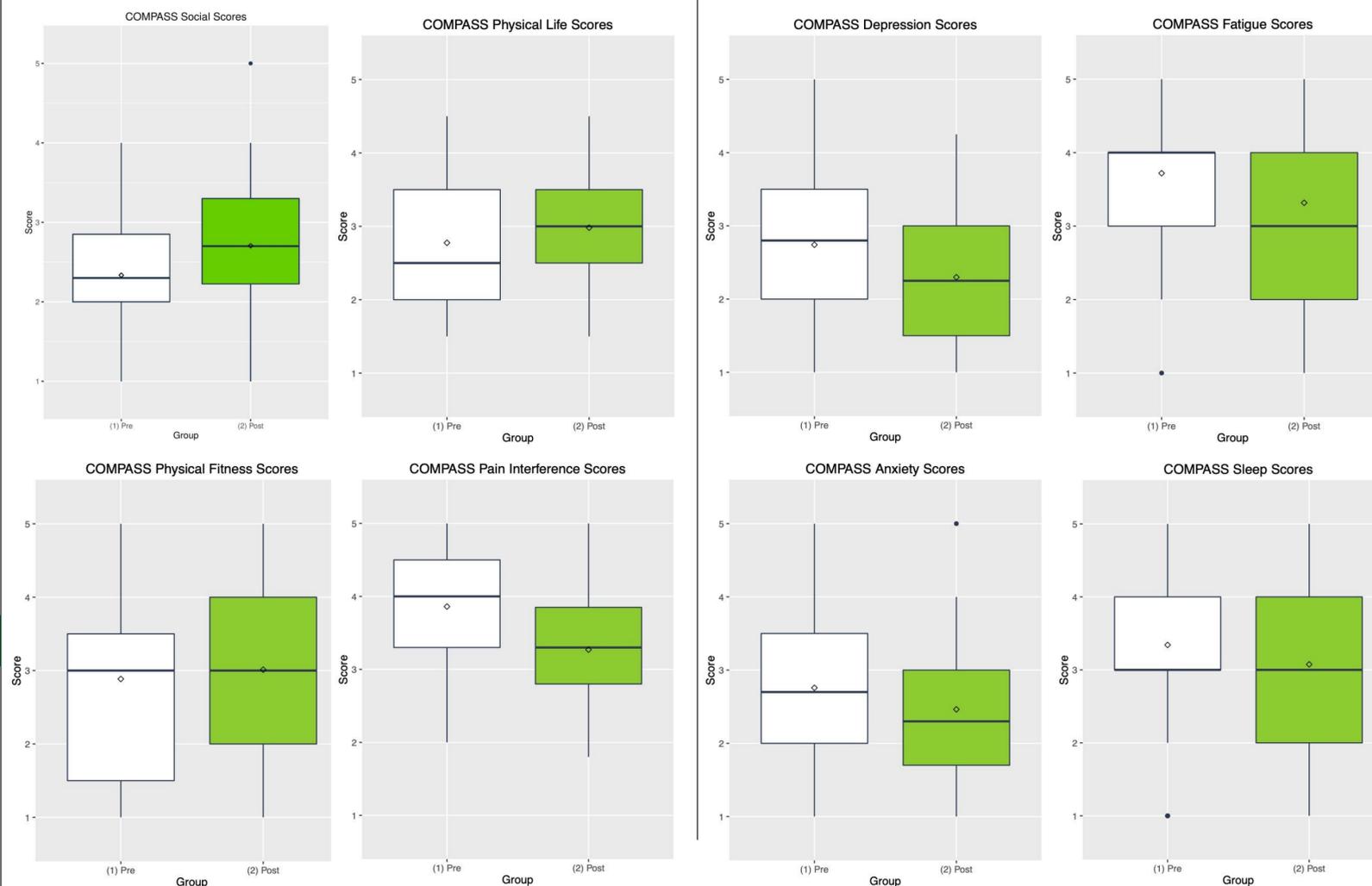
INTRODUCTION

- An integrative and comprehensive approach to pain management seeks to advance patient outcomes with respect to quality of life, pain management, mindfulness, and physical function. This biopsychosocial approach is an evidence-based medicine modality that has been executed to be cost-effective and targeted to meet individual patient values. Participants can enroll in integrative pain intervention modalities to treat their chronic ailments; examples include Acceptance and Commitment Therapy, PT, OT, nutrition, reiki, hypnosis and yoga. In a systematic evaluation of integrative health projects, Turk et al. concluded interdisciplinary programs yielded better outcomes than traditional pain treatments.
- This project tested the hypothesis that the UVM Medical Center Comprehensive Pain Program produces beneficial patient outcomes with respect to pain management. We evaluated pre- and post- patient physical function, levels of anxiety, fatigue, sleep disturbance, and social role engagement.
- Based on our data, we believe further investigation into the benefits of Integrative Medicine is warranted for the advancement of patient outcomes with respect to pain management.

METHODS

- All participants completed the COMPASS treatment arm of the CPP. Study eligibility criteria included being ≥ 18 years, willingness to participate in therapies, and chronic pain lasting 3+ months which may affect one’s mental health, personal relationships, or ability to work.
- The data were collected by the CPP clinic during in-person visits at pre and post treatment intervals. Quality-of-life measures were used to evaluate participant mental and physical health. The dataset was provided by the CPP as raw, de-identified data.
- Our research team analyzed the *Promis-29* measure, which assessed the following 8 domains: Anxiety, Social role, Physical Fitness, Physical Life, Depression, Fatigue, Pain interference, and Sleep. Participants answered 4 questions related to each domain using a 5-point Likert scale where 1=Not at all, 2=A little bit, 3=Somewhat, 4=Quite a bit, 5=Very much. Summary measures were calculated as the average for each domain.
- The final sample (n = 41) was analyzed using paired t-tests on pre and post data for each of the 8 domains. The R-Project for Statistical Computing software was used to perform analyses. Statistical significance was defined by p-values $\leq .05$.

RESULTS



Means for each score group are marked by diamonds on the boxplots above

Summary of Results					
Domain	Pre	Post	Change	Statistically Significant	P-Value
Social	2.34	2.71	Increase	Yes	0.021*
Physical Life	2.78	2.98	Increase	Marginal	0.055
Physical Fitness	2.89	3.01	Increase	No	0.206
Pain Interference	3.86	3.27	Decrease	Yes	0.00025**
Depression	2.74	2.30	Decrease	Yes	0.002*
Fatigue	3.72	3.31	Decrease	Yes	0.006*
Anxiety	2.76	2.46	Decrease	Marginal	0.054
Sleep	3.34	3.08	Decrease	No	0.076

DISCUSSION

- Interventions offered through the UVM Comprehensive Pain Program (CPP) have shown significant improvement for patients presenting with health concerns. Notable data highlighting decreased fatigue, depression, and pain interference are suggestive of improved overall quality of life.
- While indices for anxiety and physical fitness improved, we believe further investigation through a more powered study would yield statistically significant results. Investigation of these avenues would further augment the validity of an integrative approach to pain management.
- To objectify data measurements, future study considerations may seek to analyze pre and post physical assessments utilizing concrete, numerical data, as opposed to open-ended surveys.
- Potential confounding variables may include the simultaneous use of antidepressant and analgesic medications while engaging in the pain management program.

CONCLUSION

- Following completion of the Comprehensive Pain Program, participants reported significant improvements in their depression, fatigue, social wellbeing, and pain interference.
- Participants did not report significant improvements in sleep or physical fitness, but this provides applicable feedback for the Pain Program by highlighting potential opportunities for advancement. However, the significant improvements in most of the domains already supports the Pain Program’s goal of bettering the quality of life of their participants.
- Although more studies are needed, our findings suggest that an integrative health approach plays an important role in addressing the psychological ramifications of chronic pain when used in conjunction with conventional therapies.