Understanding and Promoting Healthy Weight Loss Through a Behavioral Lens

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Introduction

This past year, the Texas A&M University System granted undergraduates the opportunity to explore integrating communication with their respective sciences through the USDA-funded Science Influencers program. This interdisciplinary program provided students with the resources to learn about science communication during the spring, to then apply their knowledge in a 10-week full-time internship through the summer. To learn more about promoting healthy weight and behaviors, I interned with Dr. Jessica Unick at Brown University Health. Dr. Unick is a Senior Research Scientist at Brown University Health's Weight Control & Diabetes Research Center. As a trained exercise physiologist, much of her research revolves around physical activity and the way exercise affects eating behaviors. Through her guidance, I pursued my passion for public health and kinesiology while learning the tools and skills necessary for research in the field of behavioral weight loss.

Background

As Dr. Unick's summer intern, I was placed on the ELEVATE and PATH trial teams, which are NIH-funded grants based on behavioral weight loss interventions. While working in the center, I worked closely with Dr. Unick on a literature review, a strength training program, and a personal abstract and poster presentation.

Purpose and Objectives

The purpose of my internship was to: enhance my understanding of behavioral weight loss treatment via participation in research meetings, observation of group classes, and review of program elements; gain familiarity with the research process, including recruitment of participants, obtaining informed consent, assessing outcomes, data collection, and treatment delivery; grow professionally by participating in team meetings, adhering to deadlines, providing progress updates, and participating in intern seminars.

The objective of the ELEVATE trial was to compare an automated online program with a group-based video conference program for weight loss, in addition to assessing how individualized coaching may affect the participants. Dr. Unick's preliminary investigation of yoga as an intervention approach (Unick et al., 2022) deduced support for yoga as a potential long-term weight loss strategy. Therefore, the objective of the PATH trial was to discover whether the addition of online yoga classes, compared to health and wellness classes, would improve desired outcomes in individuals participating in the online weight loss program.

Procedures

As a Kinesiology major and ex-powerlifter, a scholastic interest of mine at the center was the effects of strength training on behavioral weight loss interventions, as well as the potential

benefits of strength training when combined with GLP-1 medications. I began my internship with a literature review exploring behavioral weight loss interventions to craft a beginner, three-day, full-body strength training program for Dr. Unick to use as a resource in a future study. For team project involvement, I entered data, automating and updating participant reports, ad design and creation, recruitment research, and video revision. At the end of the internship, I attended professional development seminars led by various researchers at the center and created a research abstract centered around exercise identity. With the help of my mentor, I evaluated my research question with data from a previous study.

Findings

While I began my experience this summer with my eyes set on a personal project revolving around strength training and behavioral weight loss, my first assignment, a literature review, led me in a different direction. The review featured some articles on GLP-1 usage, which revealed supporting evidence for resistance training aiding in body composition. However, after my deep dive into the literature, my mentor and I were surprised to discover that, although strength training is very beneficial in many other areas, it is not effective for weight loss alone. These findings directed me to shift my focus to a research question about exercise identity and habit formation. For that project, I did a shorter literature review and evaluated data on SPSS (Statistical Package for the Social Sciences). Each week, Dr. Unick and I worked to decode the data and relate it to our question. We found exercise identity and habit formation were correlated with some, but not all, measures of our adherence and theory-informed determinants of exercise behavior.

Implications and Application

My experiences at Brown University Health rewired my idea of what it means to work in research. I enjoyed helping the team and knowing I was contributing to something larger than myself. I learned that I enjoy working face-to-face with the general population and loved working with participant recruitment. I was edified and challenged more than ever before. I know this experience will not only benefit me in a professional setting but it will also benefit me in many other aspects of life. I am extremely grateful for this opportunity and can happily say I have left as a better scientist, communicator, and citizen.

References

Unick, J. L., Dunsiger, S. I., Bock, B. C., Sherman, S. A., Braun, T. D., & Wing, R. R. (2022). A preliminary investigation of yoga as an intervention approach for improving long-term weight loss: A randomized trial. *PloS One*, *17*(2), e0263405. https://doi.org/10.1371/journal.pone.0263405