





Research & Professional Development Research Methods and Statistics

Research & Professional Development 2 - Strategies for Effective Clinical Research: Spotlight on Mechanistic and Team Science Approaches

 Friday, November 21, 2025  3:00 PM - 4:30 PM CST  Location: Foster 1, Level 2

 Earn 1.5 Credit

Keywords: Research Methods, Treatment Development, Clinical Trial

Level of Familiarity: Moderate

Presenter(s)



Michael W. Otto, Ph.D. (he/him/his)

Professor
Boston University
Boston, MA, United States



Jeffrey L. Birk, Ph.D.

Assistant Professor of Medical Sciences
Columbia University Medical Center
New York, NY, United States



Jasper A.J. Smits, Ph.D.

Professor
The University of Texas at Austin
Austin, TX, United States

Behavioral interventions are among the first-line therapies for improving mental health and health behaviors. Despite their success, these interventions' effects can be limited, difficult to replicate, and hard to maintain. To develop and deliver efficacious, scalable, and accessible interventions, it is essential to understand why they work or fail. This requires a rigorous, transparent, and cumulative science focused on the mechanisms of behavior change throughout the behavioral intervention development process.

The Mechanistic Behavioral Research Consortium (MBRC) and the Exposure Therapy Consortium (ETC) are international collaborations of researchers working to enhance the ease and scope of replicable mechanistic investigations of behavior change. Both consortia emphasize a team approach, involving researchers from diverse labs, institutions, cultures, and countries. The goal is to facilitate replicable research by pooling resources, reducing study burden, and increasing the size and representativeness of study samples.

This workshop will introduce the team science efforts and methods of the NIH-funded Science of Behavior Change (SOBC) program, which promotes an experimental medicine approach to study the mechanisms underlying behavioral interventions to bolster intervention efficacy, promote a cumulative science, and improve theory refinement. Attendees will learn about the SOBC approach

as well as the strategies and benefits of team science, including joining the MBRC or ETC to facilitate their research productivity. Attendees will gain hands-on knowledge in the use of SOBC resources designed to facilitate mechanism-focused behavior-change research.

Recommended Reading 1: Website Resources

NIH Science of Behavior Change (SOBC): <https://commonfund.nih.gov/behaviorchange>

The Mechanistic Behavioral Research Consortium (MBRC): <https://www.mbrc-sobc.org/>

The Exposure Therapy Consortium (ETC): <https://www.exposuretherapyinfo.org/>

Checklist for Investigating Mechanisms in Mechanistic Behavior-change Research (CLIMBR): <https://scienceofbehaviorchange.org/climbr-tool/>

Recommended Reading 2: Birk JL, Otto MW, Cornelius T, Poldrack RA, Edmondson D. Improving the Rigor of Mechanistic Behavioral Science: The Introduction of the Checklist for Investigating Mechanisms in Behavior-Change Research (CLIMBR). *Behav Ther.* 2023 Jul;54(4):708-713. doi: 10.1016/j.beth.2022.12.008. Epub 2022 Dec 23. PMID: 37330259; PMCID: PMC10279971.

Recommended Reading 3: Stoeckel LE, Hunter C, Onken L, Green P, Nielsen L, Aclin WM, Simmons JM. The NIH Science of Behavior Change Program: Looking Toward the Future. *Behav Ther.* 2023 Jul;54(4):714-718. doi: 10.1016/j.beth.2023.03.006. Epub 2023 Mar 30. PMID: 37330260; PMCID: PMC10331559.

Learning Objectives:

At the end of this session, the learner will be able to:

1. Identify the elements of state-of-the-art mechanistic behavioral research.
2. Know and utilize the resources provided by the NIH SOBC program.
3. Identify the advantages and strategies of team science approaches to mechanistic research.
4. Aptly understand and utilize the NIH Stage Model.
5. Use the Checklist for Investigating Mechanisms in Behavior-Change Research (CLIMBR) in planning and reporting mechanistic research.