Supporting Individuals through
Research, Education, and Mentorship

1.) Jadad, A. R., Moore, R. A., Carroll, D., Jenkinson, C., Reynolds, D. J. M., Gavaghan, D. J., & McQuay, H. J. (1996). **Assessing the quality of reports of randomized clinical trials: is blinding necessary?.** Controlled clinical trials, 17(1), 1-12.

* This study describes the development of an instrument to assess the quality of reports of randomized controlled trials, and its use to determine the effect of rater blinding on the assessments of quality. The final version of the instrument included three items that were scored consistently by all raters. As well, the authors noted blind assessments produced significantly lower and more consistent scores than open assessments.

2.) Sibbald, B., & Roland, M. (1998). **Understanding controlled trials. Why are randomised controlled trials important?**. *BMJ: British Medical Journal*,*316*(7126), 201.

* This article serves as an excellent introduction to RCT. It discusses the need for randomized clinical trials. Basic methods are provided, as well as an overview of the strengths and limitations associated with this methodology.

3.) Thorpe KE, Zwarenstein M, Oxman AD, Treweek S, Furberg CD, Altman DG, Tunis S, Bergel E, Harvey I, Magid DJ, Chalkidou K (2009). **A Pragmatic–Explanatory Continuum Indicator Summary (PRECIS): a tool to help trial designers.** Canadian Medical Association Journal 180, E47-E57.

* Within this article, a tool called PRECIS is presented to assist researchers in their design of clinical trials and to provide a sense as to the trial's applicability to clinical circumstances. The authors present 10 domains associated with trial design that include: eligibility criteria for participants, flexibility of comparison and experimental intervention manipulation, participant expertise in delivering comparison and experimental interventions, intensity of follow-up, nature of primary outcome, participant compliance with prescribed intervention, practitioner's adherence to study protocol, and specification of analysis of primary outcome.

4.) Purgato, M., Barbui, C., Stroup, S., & Adams, C. (2015). **Pragmatic design in randomized controlled trials.** Psychological medicine, 45(02), 225-230.

* This article builds on Thorpe et al.'s (2009) discussion and continues the discourse on pragmatic design in randomized controlled trials within the mental health arena.

5.) Katikireddi, S. V., Egan, M., & Petticrew, M. (2015). **How do systematic reviews incorporate risk of bias assessments into the synthesis of evidence? A methodological study.** Journal of epidemiology and community health, 69(2), 189-195.

*This study examines if and how critical appraisals inform the synthesis and interpretation of evidence in systematic reviews. Findings from this study suggest the majority of findings or conclusions presented in systematic reviews are based on studies that did not undergo critical appraisals. Thus, the authors reason many of the studies contained in systematic reviews have a moderate to high risk of bias; resulting in erroneous findings.

6.) Allen, R. W., Barn, P. K., & Lanphear, B. P. (2015). **Randomized controlled trials in environmental health research: unethical or underutilized?**. PLoS medicine, 12(1), e1001775.

* This article discusses clinical equipoise, risk: benefit ratios, and the relevance of the intervention to the study population as key issues that should be considered prior to engaging in environmental health research using randomized controlled trials.

7.) Iwamoto, F. M., & Lassman, A. B. (2015). **Factorial clinical trials: a new approach to phase II neuro-oncology studies.**Neuro-oncology, 17(2), 174-176.

* The authors describe a factorial approach which encompasses the testing of multiple drugs simultaneously and efficiently within a randomized controlled trial design. This approach to RCT trial design is presented in detail throughout this paper.

8.) Hawe, P. (2015). **Lessons from Complex Interventions to Improve Health**. Annual review of public health, (0).

* This article discusses the challenges associated with complex interventions. The authors introduce the term complexity, which they state is a result of the interactions among many components of the intervention and the environment in which the intervention is placed. The authors reasoned that in order to fully understand the effect of interventions, we have to be able to recognize and acknowledge various elements of complexity that may influence study results.

9.) Carey, T. A., & Stiles, W. B. (2015). **Some Problems with Randomized Controlled Trials and Some Viable Alternatives.**Clinical psychology & psychotherapy.

* This article presents an overview of common problems associated with randomized controlled trials and alternatives to many of these problems

10.) Raudenbush, S. W., Martinez, A., & Spybrook, J. (2007). **Strategies for improving precision in group-randomized experiments.** *Educational Evaluation and Policy Analysis*, *29*(1), 5-29.

* This article discusses when to engage in matching or covariance adjustment, and to what extent they can reduce the number of groups needed to achieve adequate power.

11.) Berger, V. W., Ivanova, A., & Deloria Knoll, M. (2003). **Minimizing predictability while retaining balance through the use of less restrictive randomization procedures.** *Statistics in medicine*, *22*(19), 3017-3028.

* In this paper, the authors engage in a technique called maximal procedure. Maximal procedure takes the extent of chronological bias allowed by the randomized block procedure, and matches it, but with fewer restrictions. In doing so, the authors argue that maximal procedure is more resistant to selection bias than randomized block procedure.

12.) Raudenbush, S. W. (1997). **Statistical analysis and optimal design for cluster randomized trials.**
Psychological Methods, *2*(2), 173.

* This article examines when and to what extent using a pretreatment covariate can increase experimental precision.