Request #: 447 - PSY - Publication/Article

Self-guided Online ACT Interventions: A Meta-analysis

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Background

The current study seeks to conduct a comprehensive meta-analysis regarding randomized control trials (RCTs) that have tested self-guided, online ACT interventions in either computer-based or mobile-based forms.Further analyses using meta-regression delineating differences in efficacy and adherence between apps and websites, between target areas (e.g., depression, chronic pain, non-targeted, etc.), and other intervention characteristics will be conducted in addition to computation of overall effect sizes. This would be a novel contribution, as previous meta-analyses have not conducted said moderation analyses (Brown et al., 2016; Sierra et al., 2018).

Sample

35 relevant RCTs have been identified, with both quantitative and qualitative data having been extracted by three coders. Some articles may not be relevant to include due to differences in compared groups, for example comparing the online treatment with face-to-face treatment as opposed to a control, so the total number of included studies in the end may be less.

Hypothesis

Online ACT treatments are hypothesized to have greater outcomes in regards to anxiety, depression, quality of life, and possibly others in comparison to control groups. This is expected to be reflected in both comparison between post treatment outcomes of groups, as well as comparisons between gains of each group (posttreatment compared to baseline). This may also be reflected in an omnibus effect size that consolidates all outcomes, but we are currently unsure whether to use only primary outcomes or all outcomes. We also plan to investigate possible moderators, but have no specific hypotheses at this time regarding moderators.

Progress

I've shaped the quantitative data in R so that it's suitable for analysis, but further work needs to be done to combine this data set with the qualitative data set (qualitative coding has not been completed yet). Some of the data has been subsetted based on reported outcomes. Some basic forest plots have been generated using effect sizes generated on comparisons between experimental and control post-treatment scores.

Request

I would like assistance with utilizing R for meta analyses, especially for computing effect sizes based on treatment gains. I've attempted this, but the numbers don't look completely right. Perspective on whether it makes sense to calculate an omnibus effect size drawing from may different outcomes would be helpful too. Suggestions for other analyses that would make sense based on the research questions would be helpful as well.

Timeline

We are not working off concrete deadlines, but I am hoping to have a decent amount of the R code completed by the end of March.