Assessing the Equivalence of Mobile Technology-Delivered Interventions and Standard Treatments for Improving Youth Mental Health: A Meta-Analysis

Maya Hareli (Loyola University Chicago), Sarah E. Broner (Loyola University Chicago), Kirsten M. Christensen (University of Massachusetts Boston), Kate Bartolotta (Fordham University), Nicola Forbes (Fordham University), Abigail Blum (Northwestern University), Elizabeth B. Raposa (Fordham University), Colleen S. Conley (Loyola University Chicago), and Mark Assink (University of Amsterdam)

There is a dearth of research examining the equivalence of technology interventions and standard treatment for treating youth mental health (MH) problems. The present meta-analysis evaluates the effect of mobile technology-delivered interventions (mTDIs) on youth well-being and seeks to explore whether mTDIs are as effective at ameliorating MH problems as standard and face-to-face (F2F) comparisons. We identified 80 controlled studies representing 83 interventions and 93 comparisons involving psychological or behavioral mTDIs geared toward youth, up to a mean age of 26. The sample was coded for the type of comparison group (k=18 clinical/established intervention; k=30 inert/placebo; k=41 no intervention/waitlist), the modality of the comparisons (k=25 F2F, or not), and whether the intervention was solely comprised of the novel technology component or also included any overlapping elements with the comparison group (in the latter case, the design tested the added benefit of the mTDIs). Contrary to our hypothesis that mTDIs with inert or waitlist comparisons would have greater effects than those with clinical comparisons, in the broader sample the type of comparison group did not moderate the overall effects, $F(2, 697)=0.184, p=0.832$, such that the effect sizes for studies with clinical ($g=0.241$), inert ($g=0.246$), and no-intervention ($g=0.281$) comparisons were not significantly different from one another. As part of the ongoing meta-analysis, further analyses will explore whether mTDIs add additional value relative to the clinical comparisons, as well as whether they have added benefits among the studies with a clinical comparison that was delivered F2F.