Title: A Mobile App Based Cognitive Dissonance Intervention for Smoking Cessation

NCT Number: NCT05797155

Date: 3/15/2025

The study included a group-delivered intervention and an ungrouped control condition, creating a partially nested design. The models allowed for between-cluster variability in the outcomes solely within the intervention group to reflect the partial clustering of the data (Baldwin et. al., 2011). Logistic regression models were estimated with a binomial distribution and logit link using the SAS software (Version 9.4) with SAS PROC GLIMMIX and used to test for condition differences (1 = *S2Q*, 0 = control), separately at 1- and 3-month follow-up, for the dichotomous outcomes. Odds ratios (ORs) were reported as a measure of effect size, following conventional benchmarks: 1.5 (small), 2.5 (medium), and 4.3 (large; Chen et al., 2010). To address missing data, models were estimated with 20 imputed datasets using SAS PROC MI, and results were combined using SAS PROC MIANALYZE. Mixed-effects growth models were used to evaluate condition differences in the continuous Fagerstrom outcome. The baseline was defined as the random intercept, and the model included fixed effects variables for time, measured in months since the baseline assessment, the randomized condition variable (1 = *S2Q*, 0 = control), and a time-by-condition interaction term. The interaction term estimates the change in the outcome from baseline to 3-month follow-up for the intervention condition relative to the control condition. Models were estimated with maximum likelihood using all available data. Cohen's *d* was provided as a measure of effect size using conventions: 0.2 (small), 0.5 (medium), and 0.8 (large).