Woebot for Substance Use Disorders During COVID-19

NCT04460027

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Statistical Analysis Plan

Paired samples t-tests and chi-square tests compared the groups on baseline variables. EOT survey completion was 84% (152/180) and significantly higher for participants identifying as non-Hispanic white (89%) compared to other racial/ethnic groups (74%) and for participants with a college degree (89%) relative to high school degree (74%) (p-values<.01). Retention also was higher for participants who at baseline reported more pandemic-related mental health effects and lower levels of craving, pain, and pain interference (p-values<.05). Of the 17 treatment participants lost to follow-up, 16 never registered with the W-SUDs app. Fig. 1 shows rates of noncompliance by condition. Two participants randomized to waitlist (2%) downloaded Woebot (not SUD-tailored) from the app store during the study period. Analyses followed the intent-to-treat protocol.

General Linear Models (multivariate models) tested for group differences in changes in the primary outcome and secondary outcomes. The dependent variables were baseline to EOT change scores. The models adjusted for baseline group differences and applied weights to adjust for correlates of study retention. Participant weights were calculated as the inverse of predicted probability values from a logistic regression model predicting EOT retention with race/ethnicity, education, craving, pain intensity, and pandemic-related mental health effects. Pain rating and pain interference were highly correlated (r = .74), due to missing data and multicollinearity, the pain rating item was not included. To examine associations among outcomes, bivariate correlations were run for the changes scores. Lastly, survey data were linked to treatment participants' app use metrics and tested for associations.