

# Telephone-based cognitive behavioral therapy for depression in Parkinson disease

## A randomized controlled trial

Roseanne D. Dobkin, PhD, Sarah L. Mann, PhD, Michael A. Gara, PhD, et al.

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### Study objective and summary result

This study tested the hypothesis that telephone-based cognitive behavioral therapy (CBT) alleviates depressive symptoms in patients with depression and Parkinson disease (PD), and the results showed that telephone-based CBT reduces depressive symptoms in such patients.

### Classification of evidence

Class I.

### What is known and what this paper adds

CBT shows promise as a treatment for depression in patients with PD, but various barriers can prevent patients from accessing it. This investigation's results provide evidence that telemedicine can help patients benefit from CBT despite such barriers.

### Participants and setting

The investigators recruited 72 patients with PD and depressive symptoms (49% male; mean age,  $65.22 \pm 9.63$  years) through the Departments of Neurology and Psychiatry at the Robert Wood Johnson Medical School (Piscataway, NJ) between August 2015 and September 2017.

### Design, size, and duration

For this randomized, controlled trial, the investigators used computer-generated randomization with stratification by antidepressant usage to assign the participants to groups that received treatment as usual (TAU;  $n = 35$ ) or TAU plus telephone-based CBT ( $n = 37$ ). The CBT regimen consisted of weekly telephone-based CBT sessions for 3 months and monthly sessions for another 6 months. Blinded raters used the Hamilton Depression Rating Scale (HAM-D) to assess the participants' depressive symptoms at baseline and follow-up timepoints.

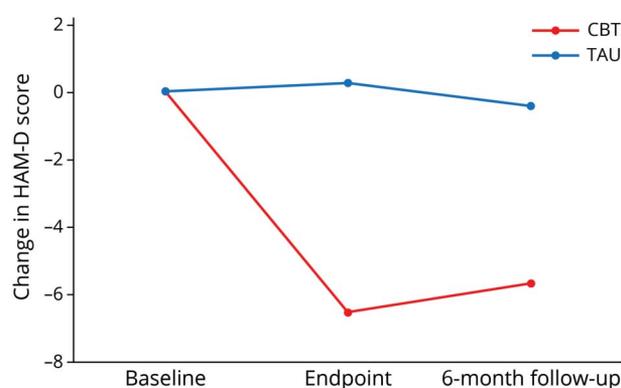
### Primary outcome measures

The primary outcomes were from-baseline changes in HAM-D scores 3 months into the trial.

### Main results and the role of chance

Relative to the TAU group, the CBT group achieved a greater from-baseline improvement in HAM-D scores 3 months into the trial ( $p < 0.0001$ ), and these effects persisted during 6-month follow-up ( $p < 0.0001$ ).

**Figure** Mean HAM-D change scores at different timepoints in the TAU (blue) and CBT (red) groups



Greater change scores reflect less severe depressive symptoms

### Harms

The investigators observed no serious adverse events.

### Bias, confounding, and other reasons for caution

As this study was designed to compare telephone-delivered CBT's efficacy to usual care, it was not possible to fully disaggregate the effects of the specific CBT regimen from the general effects of engagement in psychotherapy.

### Generalizability to other populations

The present study's results may not generalize to patients with advanced PD and dementia.

### Study funding/potential competing interests

This study was funded by the Michael J. Fox Foundation for Parkinson's Research and the Parkinson's Alliance. The authors report no competing interests. Go to [Neurology.org/N](http://Neurology.org/N) for full disclosures.

### Trial registration number

NCT02505737 on [ClinicalTrials.gov](http://ClinicalTrials.gov).

A draft of the short-form article was written by M. Dalefield, a writer with Editage, a division of Cactus Communications. The corresponding author(s) of the full-length article and the journal editors edited and approved the final version.

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