EVALUATING THE EFFICACY OF A COGNITIVE-EMOTIONAL TRAINING INTERVENTION FOR DEPRESSION

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BACKGROUND

- Cognitive-emotional control training is a promising novel approach to treating Major Depressive Disorder (MDD).
- We report a replication of efficacy in a randomized, controlled, double-blind trial of a cognitive-emotional control training exercise designed to enhance cognitive control for emotional information processing and target components of the neural networks implicated in MDD.
- The intervention was designed to target abnormal activation patterns between dorsolateral prefrontal cortex (DLPFC) and amygdala, which subserve the impairments in cognitive control and emotion regulation observed in MDD (see Figure 1).
- The cognitive-emotional training exercise is a combination of emotion identification and working memory task: the Emotional Faces Memory Task (EFMT; Figure 2). The training regimen involves completing 18 sessions over 6 weeks. The sessions are progressively challenging and adapt to the participants’ performance.
- In a single, non-progressive session in healthy volunteers, this task simultaneously activated DLPFC and amygdala.
- The control group involved an active comparator task, a working memory training that used an identical paradigm to EFMT except the stimuli were neutral shapes.

METHODS

PARTICIPANTS

- All participants were between the ages of 18-55 and not currently taking an antidepressant medication.
- Potential participants were screened with the SCID-IV to confirm MDD diagnosis for inclusion, and HAM-D-17 was administered to confirm scores between 16-27.
- 38 participants signed consent and enrolled in a trial of EFMT versus an active control group.
- 32 participants completed at least 4 weeks of training and were included in the modified intention-to-treat analysis.

PROCEDURES

- Participants were randomly assigned to the EFMT or an active control group, and completed up to 18 sessions over 6 weeks.
- MDD symptoms (Ham-D-17) were assessed at baseline and weekly through outcome (week 6).

RESULTS

- All participants were between the ages of 18-55 and not currently taking an antidepressant medication.
- Potential participants were screened with the SCID-IV to confirm MDD diagnosis for inclusion, and HAM-D-17 was administered to confirm scores between 16-27.
- 38 participants signed consent and enrolled in a trial of EFMT versus an active control group.
- 32 participants completed at least 4 weeks of training and were included in the modified intention-to-treat analysis.

CONCLUSION

- Cognitive-emotional exercise holds promise as a novel paradigm for MDD treatment.
- The present study replicated pilot results demonstrating superior MDD symptom improvement associated with EFMT compared to an active control condition.
- We hypothesize that effective connectivity changes between DLPFC and limbic system result from the training and are associated with symptom response. fMRI studies investigating this hypothesis are underway.

REFERENCES

- Young Investigator Grants #19080 and #24100 awarded to Brian M. Iacoviello, PhD.