Trials focusing on depression in older adults

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Background

• Goal #1: Assess cognitive control abilities in different populations

• Goal 2: Given #1, come up with way to enhance deficient processes in these groups
Across the lifespan......
Background

• ~ 1/3 of individuals treated with anti-depressant medications / psychotherapy do not achieve adequate response, even after multiple treatments

• Even when standard treatments improve mood symptoms, many individuals, especially older adults, are left with persistent executive dysfunction
Executive dysfunction in older individuals with MDD often reflects inefficient functioning of cognitive control networks.

One idea —> target such dysfunction through the repetitive engagement of this network.
Games for Overcoming Late-Life Depression

- Patricia Areán
- Faith Gunning

4 weeks of training (EVO) versus traditional approach (PST)

- Geriatric individuals with severe depression
- Were eager to try non-pharmaceutical treatments

Anguera et al. 2016
Depression Severity

Hamilton Depression Rating (Total Score)

Week 0 | Week 4 | Week 8
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EVO | PST

Anguera et al. 2016
Cognitive Control in each group

Working Memory Improvement

Sustained Attention Improvement

Anguera et al. 2016
What about doing this work at scale?

Can mood and brain game apps really contribute to mental health?

Anguera et al. 2016
Arean et al. 2017
Pratap et al. 2018
Do mood and brain game apps really work?
Join our 100% mobile study to explore if these apps improve your mood, concentration and motivation.
You don’t even have to leave your home to join.

Eligibility Assessment (PHQ-9) → Self-administered depression rating

Randomization → EVO

PST

Health Tips
How to get a good night’s sleep
Click to learn more
Enrollment across the United States

* Majority came in via craigslist under part-time jobs!

Anguera et al. 2016
Arean et al. 2017
Pratap et al. 2018
Remediation

Depression by Group

PHQ-9 Total Score

Start | Wk1 | Wk2 | Wk3 | Wk4 | Wk12

Anguera et al. 2016
Arean et al. 2017
Just another tool, not the ONLY tool

- Traditional Education
- Enriched Environments
- Physical exercise
- Nutrition
- Neurofeedback
- Meditation
- Neuromodulation

‘Video games’
Final thoughts + Gaps to consider

• Personalized treatment for those *not* near medical centers are becoming a thing of the *PRESENT*

• Older adults are indeed willing (even excited) to try such approaches

• Gap: Lots of digital approaches that could be of interest to this population....

• Gap: Consideration for how such differentially engage minority populations looking for alternative treatment strategies
Thanks! Questions?

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References


