

Review of: "Feasibility and Efficacy of a Newly Adapted Multimodal Cognitive Intervention for the Elderly with Mild Cognitive Impairment"

Jared Roach¹

¹ Institute for Systems Biology

Potential competing interests: No potential competing interests to declare.

This paper describes adaptation of the Motivationally Enhanced Compensatory Cognitive Training for Mild Cognitive Impairment (ME-CCT-MCI) to an Indian population. This could be useful to a very large number of people in Asia who are on the Alzheimer's disease spectrum, by trailblazing a cost-effective and scalable intervention.

MAJOR CONCERNS

A. The main reference to this paper is (as cited in the paper) an unpublished treatment manual (Huckans et al., 2018). However, an online version can be found [here](#), which was published in October 2019. The use of an unpublished main reference makes it very hard for the reader, as the details of this reference are not summarized in the present manuscript, and as it is unpublished, there is no way for the reader to get up to speed. Short of making assumptions that perhaps the 2019 reference is similar enough to serve. The current manuscript needs to be written so that a reader unfamiliar with this reference can follow and understand the paper.

B. The rational of the various activities described in the paper is not well supported. One might suppose that the main effort as described was to translate the ME-CCT-MCI culturally appropriately. I gather this was done, and then I surmise that the 7 experts were recruited to evaluate the translation? But I am not sure. Perhaps the 7 experts assisted in the the translation. And then once a revised translation was available, 12 participants were asked to see if they were "satisfied" (a combination of subjective usefulness, ease of use, and acceptability) with the translated ME-CCT-MCI. And then it was deployed on 36 participants to see if it was safe? or effective(?).

C. How long was the intervention?

D. What was the length of time between baseline and followup testing?

E. Do the results in Table 5 have anything to do with the intervention, or are they just expected results of following this cohort over this period of time? Or, despite the reported p-values, was the significance improperly calculated/interpreted and there were no differences between baseline and follow-up - because one guesses the study was underpowered (and there were no power calculations) as it was described as a pilot study?

F. Are the authors using all components of the ME-CCT-MCI or just cognitive training (see point #12 below).

G. Mention in the Abstract that the target population is to India.

MINOR ISSUES

1. Define all acronyms the first time each is used. e.g., "IAME-CCT-MCI" in the Abstract

ABSTRACT

2. "The first phase involved rehabilitation experts (N=7) for content evaluation"

This sentence is not very informative, particularly as the reader does not yet know what this paper is about. Better to format it as "Seven rehabilitation evaluated content of ____ in order to ____."

3. Then there seem to be three phases, because you write:

"Followed by twelve elderly participants with MCI (N=12) were selected for rating the intervention. In phase two, Thirty-two (32) elderly participants were utilized to conduct a randomized pilot study using Single-group pretest-posttest design."

should this be

"In phase two, elderly participants with MCI (N=12) rated the intervention. In phase three, elderly participants (N=32) were enrolled in a randomized pilot study using a single-group pretest-posttest design."

4. Use units for all numbers. The reader has no idea what the units are for the numbers in results. Also add confidence intervals.

e.g., "Experts agreed that each module was relevant to the intended target (3.87),"

5. "Analysis of the paired t-test analysis revealed that the intervention program enhanced the cognitive and memory functions of the elderly."

Need to add the p-value to this sentence.

INTRODUCTION

6. Consider putting a page break before the INTRODUCTION so the header is not orphaned.

7. "Traumatic Brain Injury"

not capitalized.

8. "multi-model intervention"

do perhaps mean "multi-modal"?

MAIN BODY

9. "During the first phase, 10 rehabilitation experts were approached to participate in the study."

why did the three decline to participate?

10. TABLE 3. You do not need all the extra precision on the percents. Leave out the numbers after the decimal.

11. TABLE 5. How is effect size computed. P-values may be more useful to the reader than t-values. Indeed the footnote "<0.05 level of significance" makes no sense unless p-values are invoked. Please show units (e.g, to differentiate effect size from mean difference).

DISCUSSION

12. "the integrated form of cognitive training activities"

But the 10/2019 online version of ME-CCT-MCI has all these components:

- Physical Exercise • Mindfulness Practice
- Mental Exercise
- Healthy Eating
- Other Lifestyle Strategies
- Day Planner / Calendar System Use
- Attention Strategies
- Memory Strategies

So you should mention these as well as cognitive training (which I believe is just "mental exercise"). Unless you only used cognitive training. It is very important to be clear whether you are discussing a unimodal intervention (just cognitive training) or a multimodal intervention (several or all of the components of ME-CCT-MCI).