

Overview of the scientific validation process of the Luci program

Our scientific validation process is based on the [ORBIT](#) model for developing behavioural change interventions and consists of three successive phases.

The aim is to evaluate whether the Luci program is effective in helping participants improve their lifestyle habits to promote brain health. Read on for the latest results!



The researchers leading the scientific validation



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Research Director at Lucilab, cognitive neuroscience expert.
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President of the Lucilab scientific committee, expert in the neuropsychology of cognitive aging.
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Why three phases?

The key to measuring the effectiveness of a program like Luci is to conduct a study with many participants. This requires significant time and resources, so rather than blindly embarking on a large-scale study, we decided to take things one step at a time! By breaking down the scientific validation process into smaller chunks, our team is better able to make adjustments to the research protocol and program, if need be.



THE LUCI PROGRAM AT A GLANCE

- **GOAL:** promote the adoption of healthy lifestyle habits known to have a protective effect on the brain
- **DOMAINS COVERED:** healthy eating, physical activity, and intellectual stimulation
- **TARGET POPULATION:** adults aged 50 to 70*, with no cognitive impairment, who do not meet the recommendations in at least one of the three domains
- **HOW IT WORKS:** access to an online platform where you can take stock of your current habits, receive support from a healthy lifestyle advisor, set personal goals, and consult educational and practical resources

*The program is offered to all adults in a general public (non-study) context.



Institut universitaire de gériatrie de Montréal

In collaboration with the IUGM Research Centre and Lucilab's [scientific committee](#).

Our current situation

Phase 1 Oct. 2020 - Jan. 2021



Phase 2 Nov. 2021 - June 2022



Phase 3

Proof of concept

OBJECTIVE: Assess whether any signals of change are observed in participants' lifestyle habits in each of the domains, considered separately.

DURATION: 9 WEEKS

STUDY DESIGN:

Participants were divided into 4 groups: 1 group per domain and 1 multi-domain group (including all 3 domains).

NUMBER OF PARTICIPANTS: 38

RESULTS

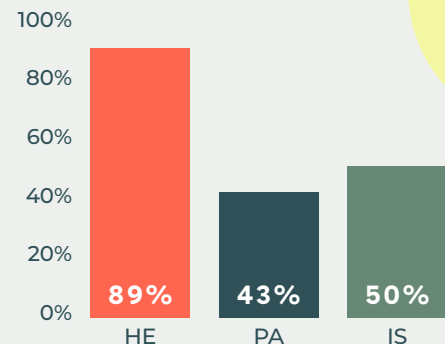
In each domain, the proportion of participants who significantly improved their lifestyle habits approached, met, and even widely exceeded 50%.

Proportion of participants who achieved a significant change in lifestyle habits in each domain group, between the start and end of the study.

HE = Healthy eating
PA = Physical activity
IS = Intellectual stimulation

SUCCESS CRITERIA ACHIEVED!

We can move on to phase 2.



Pilot feasibility study

PRIMARY OBJECTIVE: Determine, based on a limited number of participants, whether the efficacy study protocol (step 3) is feasible, e.g., Can we recruit participants quickly enough? Will those who enroll in the study stay until the end? Are participants committed to the program?

DURATION: 24 WEEKS

STUDY DESIGN:

Participants were randomly divided into 2 groups: those in the "Luci" group (n=83) had immediate access to the program, while those in the "control" group (n=40) were placed on a waiting list for 24 weeks before accessing the program.

NUMBER OF PARTICIPANTS: 119

RESULTS

Each of the feasibility targets were met, including:

- Recruitment: All participants were recruited within 1 week
- Retention: 92% of participants who started the study completed the end-of-study questionnaires
- Adherence: In the Luci group, 85% of participants attended at least 12 of the 18 scheduled meetings

SUCCESS CRITERIA ACHIEVED!

We can move on to phase 3.



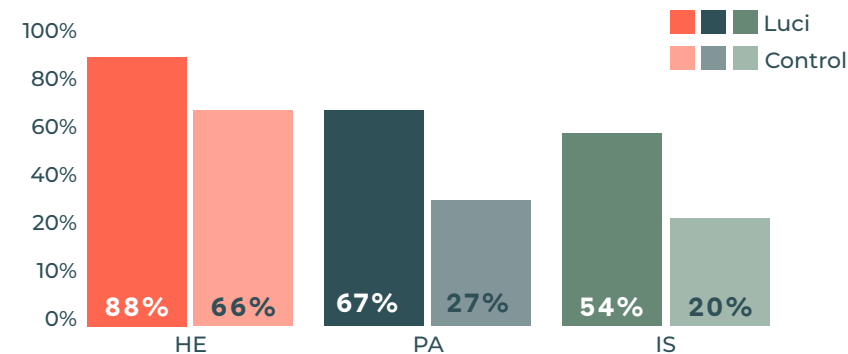
SECONDARY OBJECTIVES:

- Compare changes in lifestyle habits of participants in both groups.
- Assess impact of the program as perceived by Luci group participants

RESULTS

In each domain, people who went through the Luci program were more likely to have significantly improved their lifestyle habits than those on the waiting list (control group).

Proportion of participants who achieved a significant change in lifestyle habits between the start and end of the study, for each domain.



RESULTS

98%

"The Luci program has made me realize the importance of improving my lifestyle habits to promote brain health."

100%

"The Luci program has increased my intention and desire to improve my lifestyle habits."

98%

"The Luci program has helped me improve my knowledge about behaviours that contribute to brain health."

90%

"I feel more capable of improving my lifestyle habits than I did before I started the Luci program."

% of participants who "somewhat agree" or "strongly agree" with these statements

Efficacy study

Planned for 2024, the efficacy study will enable us to determine, based on a larger group of participants, whether the Luci program leads to changes in their lifestyle habits, thereby reducing their risk of developing a neurocognitive disorder such as Alzheimer's disease. Details to come!



Would you like to participate in the efficacy study?

Add your name to the Luci volunteer database to receive information during the recruitment period.

[Sign me up](#)

For more information, visit lucilab.ca