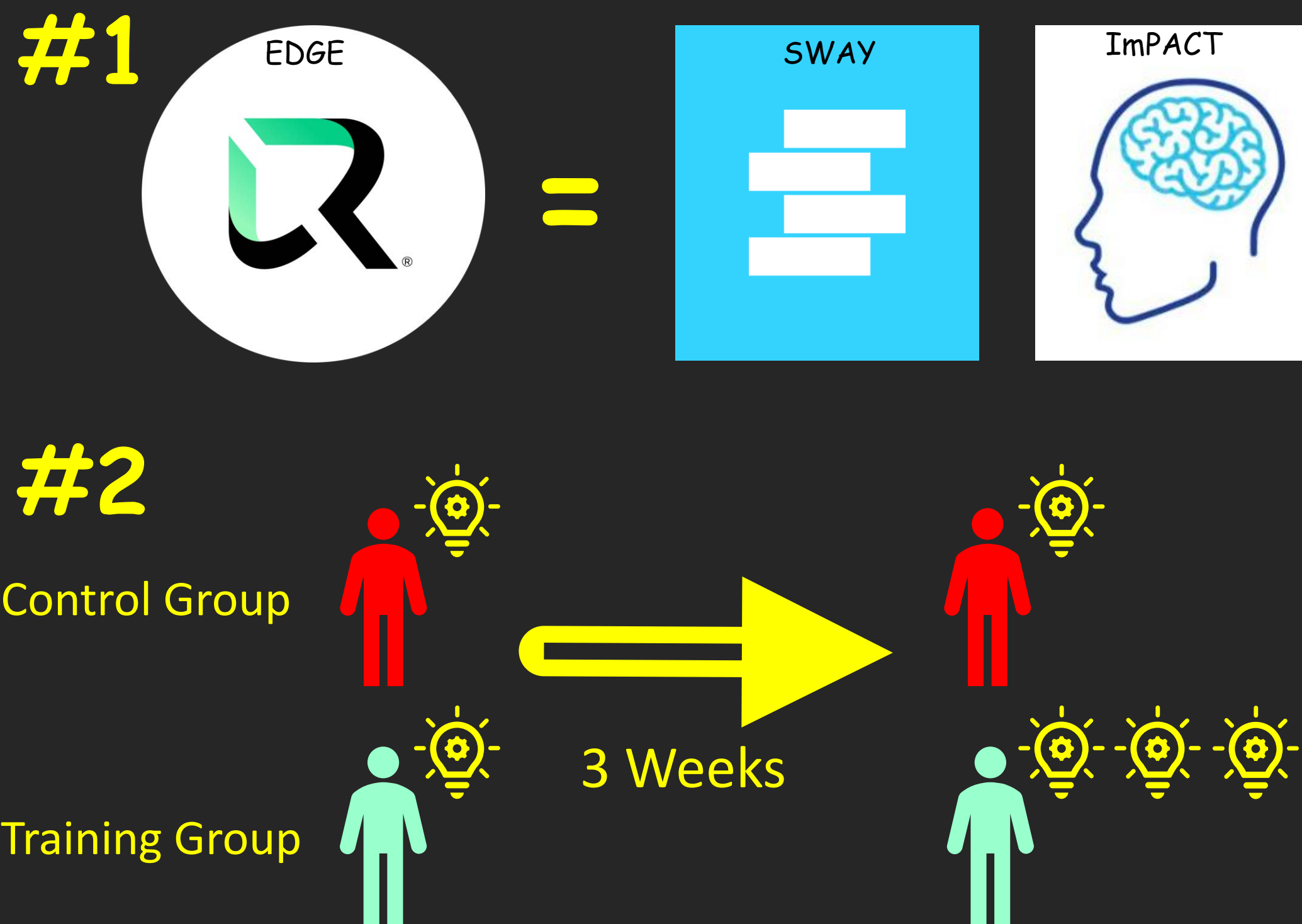


Validation of Reflexion Edge Neuro-Fitness Device and Effectiveness as a Visual, Reaction Time, and Cognitive Training Tool

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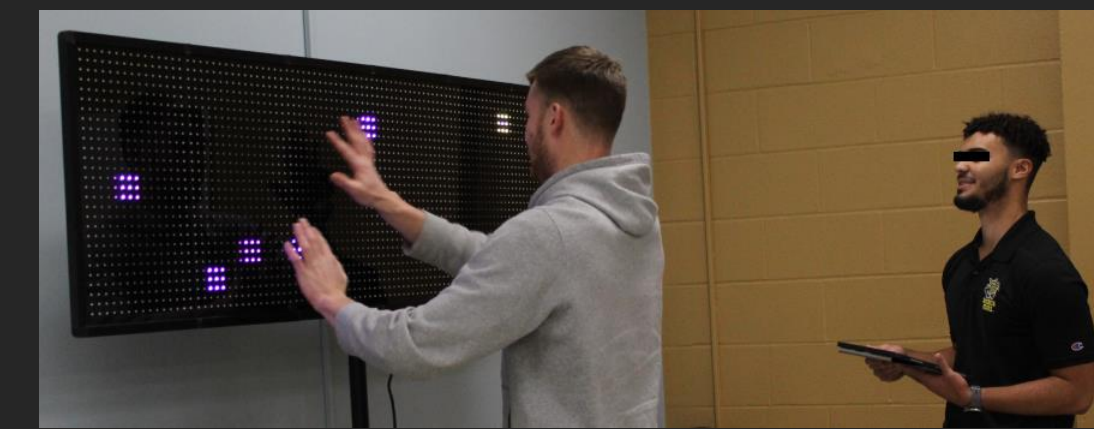
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HYPOTHESES



RESULTS

- Data collection in progress.
- Analyses
 - Multiple Correlation to determine Validity.
 - Repeated-Measures ANOVA to determine Pre/Post Training differences.
 - All analyses will be tested at $p \leq 0.05$.



METHODS

Participants:

- N = 22, 19-66 years old, M = 23.54 SD 9.81
- Training group n = 11 m = 26.27 ± sd 13.51
- Control group: n = 11 m = 20.82 ± sd 1.78

Inclusion/Exclusion Criterion:

- Health History Intake Questionnaire controlled for
 - Neurocognitive conditions
 - Uncorrected vision
 - Hearing impairment
 - Muscular orthopedic disorders
 - Influence in drug/alcohol

INTRODUCTION!

The Reflexion Edge engages central and peripheral vision and utilizes visual drills to test/train visual, reaction time, and cognitive functions through a portable touch screen light board.⁴

Purpose of Study:

- Determine accuracy of Edge compared to SWAY and ImPACT visual, reaction time and cognitive measures.
- Effectiveness of Edge as a neurocognitive training tool.

CONCLUSIONS

- 1) If anticipated findings are supported, the Reflexion Edge will serve as a complimentary tool in functional and performance neurocognitive testing using both central vision and peripheral vision.²
- 2) It is anticipated that one's eye-hand coordination and neurocognitive performance will improve following routine neurocognitive training on the Reflexion Edge.¹

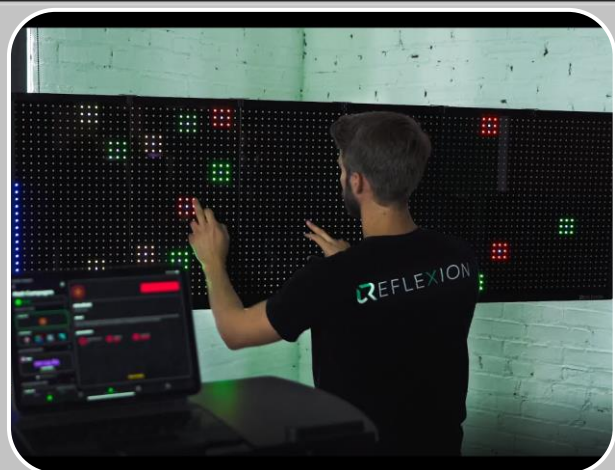


Figure 1: Reflexion Edge Assessment of peripheral vision, hand-eye coordination, and reaction time through touch tablet

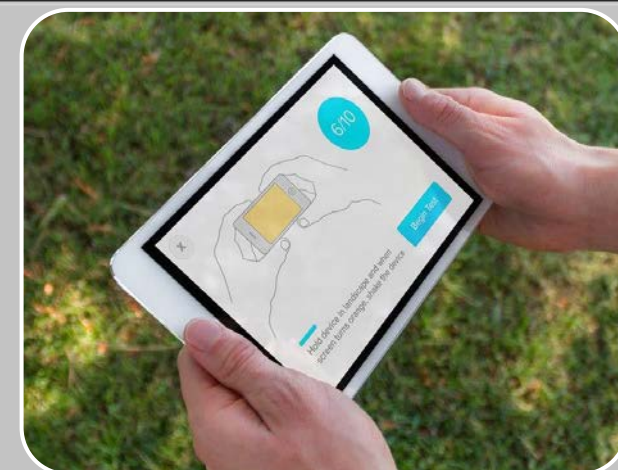


Figure 2: SWAY Assessment of memory, balance, and reaction time through mobile app

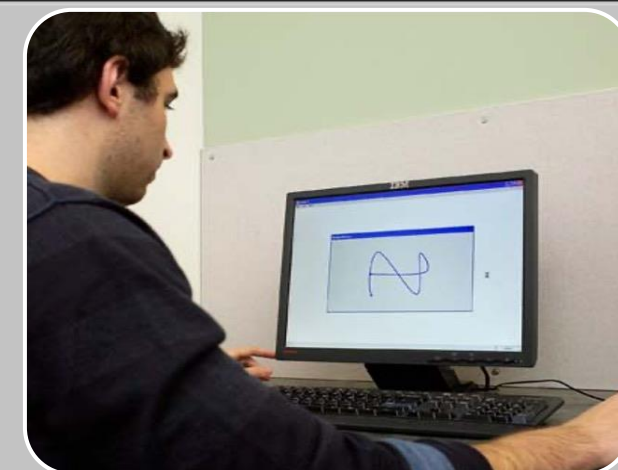


Figure 3: ImPACT³ Assessment of memory and association reactions through computer

Conditions:

- Pre/Post Test on all 3 neurocognitive devices.
 - Edge, 6 modules
 - SWAY, 8 modules
 - ImPACT, 6 modules

Training group:

- Training on 6 Edge modules only
- 2x a week for 3 weeks

FUTURE DIRECTION

- Continuation of current study for a larger sample size.
- Assessing effectiveness of Edge neurocognitive testing and training across ages (young, older) and those with motor and neurocognitive disorders.

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