

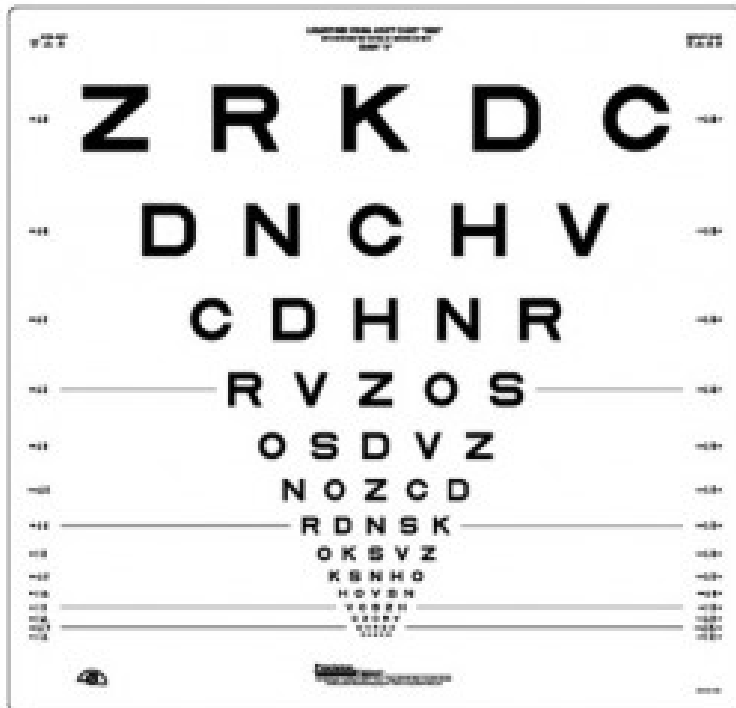


Summary of Cognitive and Visual Data for MONQ Focus

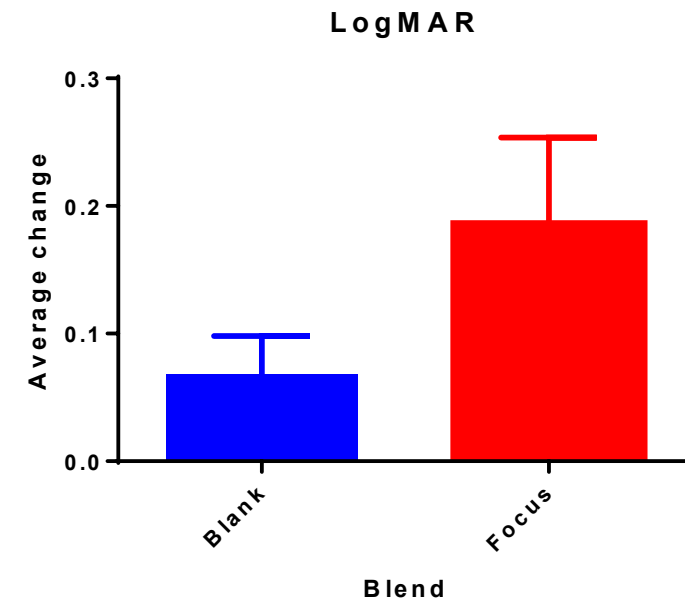
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Visual Acuity: Focus improved vision as measured by LogMAR

The LogMAR test measures visual acuity, and is similar to the more common Snellen eye test. It is commonly used to measure visual acuity in athletes. Participants are asked to read letters from top to bottom.



Visual acuity improved by 19%
(1 to 2 extra lines on an eye chart) n=24;
p<0.05



Mean, Blank: 0.068
Mean, Focus: 0.187

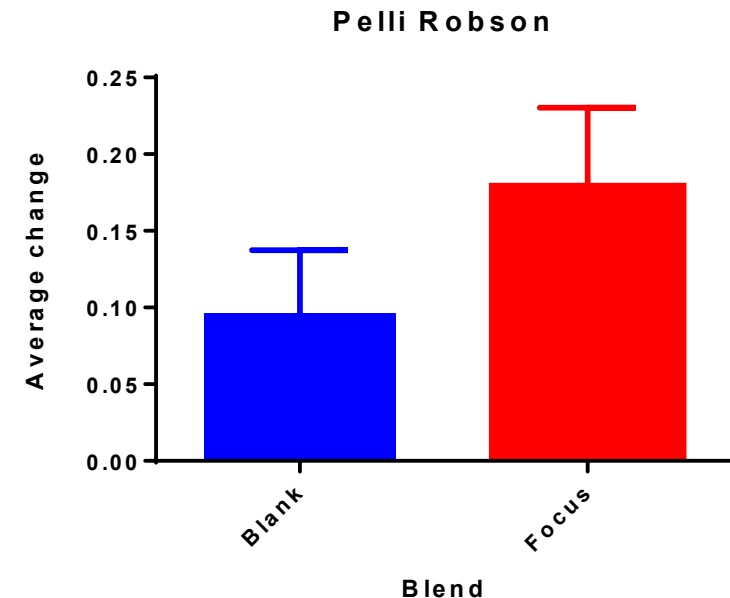
Contrast Sensitivity: Focus improved vision as measured by Pelli Robson



The Pelli Robson test measures contrast sensitivity. Each triplet decreases in contrast by 0.08 log units. Participants are asked to read from left to right, top to bottom.



Contrast sensitivity improved by 18%
(1 to 2 extra triplets) n=24 p<0.05



Mean, Blank: 0.095
Mean, Focus: 0.177

Improved vision by MONQ Focus can have tangible benefits

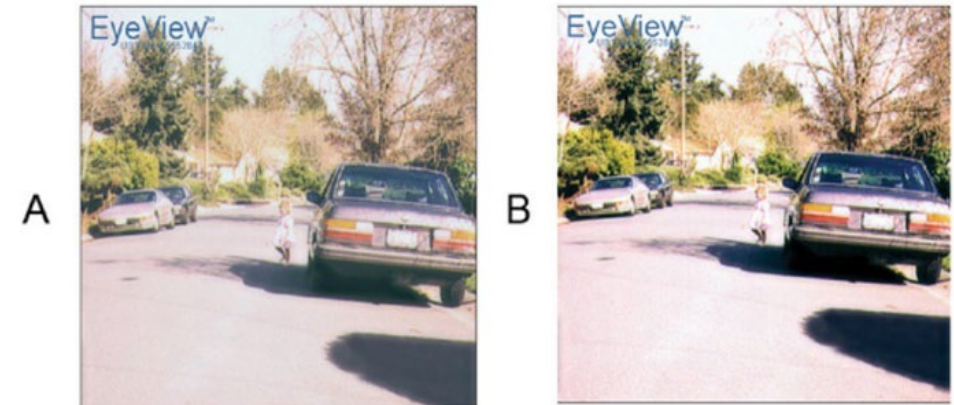


Comparison of Image Quality Based on Contrast Sensitivity



The images below show the same scene. A is high contrast, normal daylight conditions and B is low contrast, early morning fog or glare type conditions.

<http://www.vectorvision.com/contrast-sensitivity-background/>



A is the original image and B is the image at a higher contrast sensitivity of 0.15 log units. MONQ's focus blend has been shown to improve contrast sensitivity by an average of 0.17 log units.

<http://www.opthalmologymanagement.com/issues/2007/march-2007/contrast-sensitivity-testing-20-20-and-more>

Cognition: Arithmetic Fluidity

Participants have 60 seconds to answer as many of the 100 addition, subtraction, multiplication, division questions in random order. They were allowed to answer in any order

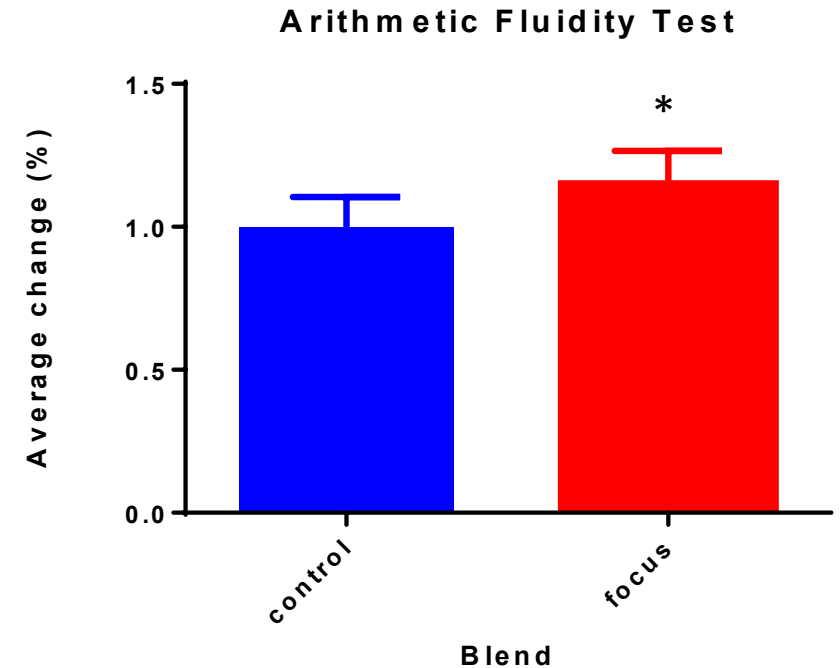
The test requires that participants

1. Maintain focus throughout the test
2. Switch between operations
3. Make rapid decisions to skip questions or not

| All Operations (A) | | | |
|---|-----------|------------|------------|
| Calculate each sum, difference, product, or quotient. | | | |
| 2 × 1 = | 12 × 7 = | 18 ÷ 3 = | 10 - 6 = |
| 2 + 3 = | 4 - 1 = | 2 + 12 = | 5 × 7 = |
| 9 + 7 = | 48 ÷ 12 = | 9 + 1 = | 20 ÷ 10 = |
| 8 + 3 = | 1 + 5 = | 15 - 11 = | 6 ÷ 2 = |
| 8 × 8 = | 84 ÷ 7 = | 3 + 2 = | 5 × 1 = |
| 5 + 3 = | 17 - 7 = | 8 - 3 = | 13 - 9 = |
| 16 - 8 = | 14 - 2 = | 10 + 6 = | 5 - 3 = |
| 2 × 11 = | 5 - 2 = | 4 + 6 = | 24 ÷ 12 = |
| 12 × 3 = | 12 × 6 = | 14 - 7 = | 11 × 10 = |
| 7 × 5 = | 11 + 11 = | 17 - 8 = | 10 ÷ 7 = |
| 12 - 11 = | 14 - 4 = | 3 + 1 = | 8 + 6 = |
| 44 + 11 = | 7 + 2 = | 132 ÷ 11 = | 110 ÷ 10 = |
| 4 + 10 = | 8 + 9 = | 132 ÷ 12 = | 6 + 10 = |
| 16 - 5 = | 6 + 5 = | 12 × 3 = | 27 ÷ 3 = |
| 13 - 6 = | 36 ÷ 3 = | 99 ÷ 9 = | 11 × 10 = |
| 13 - 8 = | 96 ÷ 8 = | 12 × 8 = | 4 + 12 = |
| 7 × 9 = | 70 ÷ 7 = | 11 × 12 = | 15 - 12 = |
| 3 + 1 = | 2 + 12 = | 3 × 2 = | 17 - 9 = |
| 11 + 9 = | 12 + 8 = | 11 × 6 = | 90 ÷ 9 = |
| 10 - 2 = | 32 ÷ 4 = | 12 + 3 = | 7 × 1 = |
| 22 - 10 = | 4 - 3 = | 6 - 3 = | 3 × 5 = |
| 35 ÷ 7 = | 7 × 2 = | 9 + 11 = | 13 - 11 = |
| 23 - 12 = | 12 ÷ 6 = | 8 ÷ 2 = | 7 + 11 = |
| 4 × 1 = | 9 + 8 = | 17 - 6 = | 5 × 9 = |
| 63 ÷ 9 = | 6 × 6 = | 14 - 10 = | 7 + 9 = |

Math-Drills.Com

Arithmetic speed improved by 15%
N=17; p<0.05



Cognition: Focus improved cognitive flexibility as measured by the Stroop Test

The Stroop test is a common test for measuring cognitive flexibility and executive function

The task is to state the **color of the text** as fast as you can, not the colors that the text spells

Example: **RED** **BLUE** **GREEN** **YELLOW**

Answer: red yellow red green

This requires cognitive flexibility to correctly identify colors over words

Why Stroop?

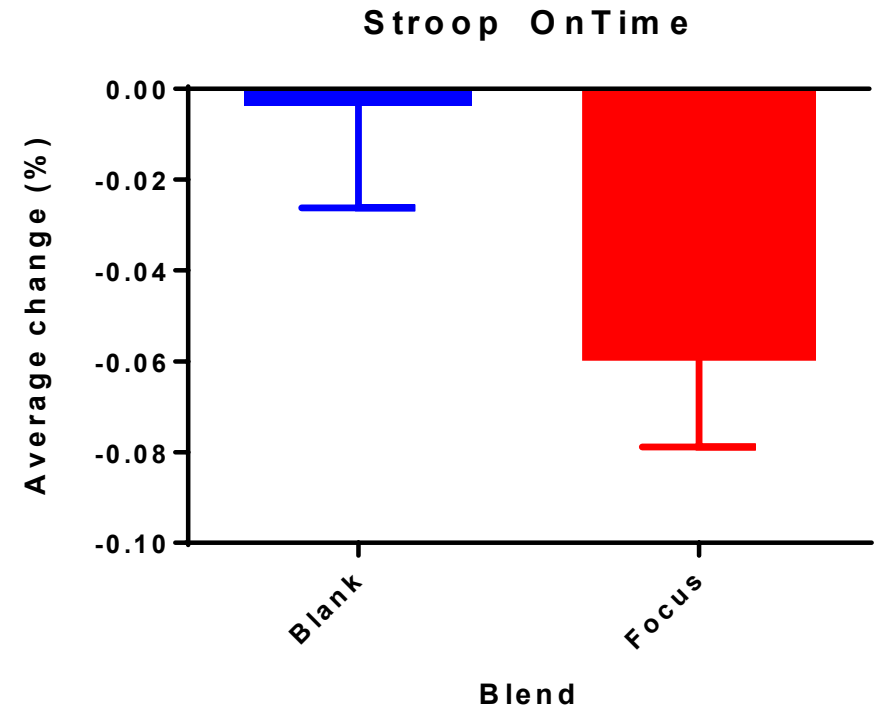
- Sensitive to altered states of consciousness

- Used to measure executive function

- Is an objective measure of changes in mental processing

- More reliable than self-reported measures

Response time improved by 8%
N=17; p<0.05



Flow State: Focus Increased cognitive state as measured by Flow State Scale (FSS)

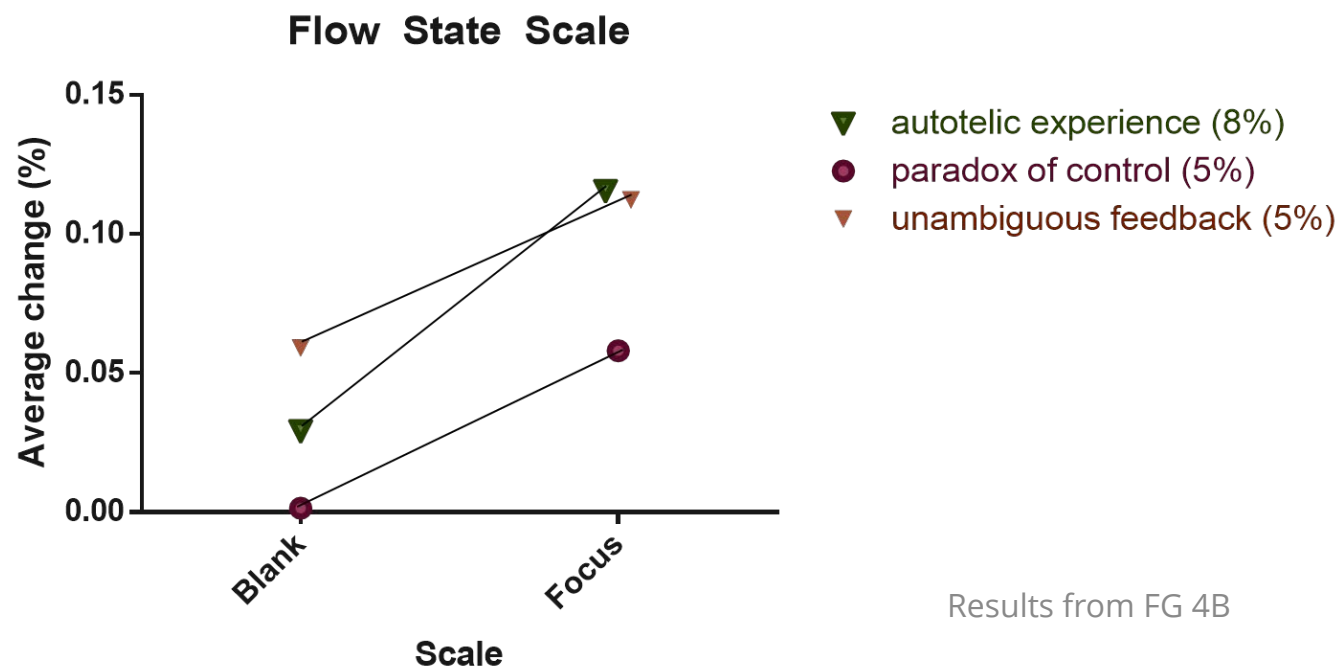


The Flow State Scale is a self-reported measurement

It consists of 36 statements, each followed by a 5-point Likert scale

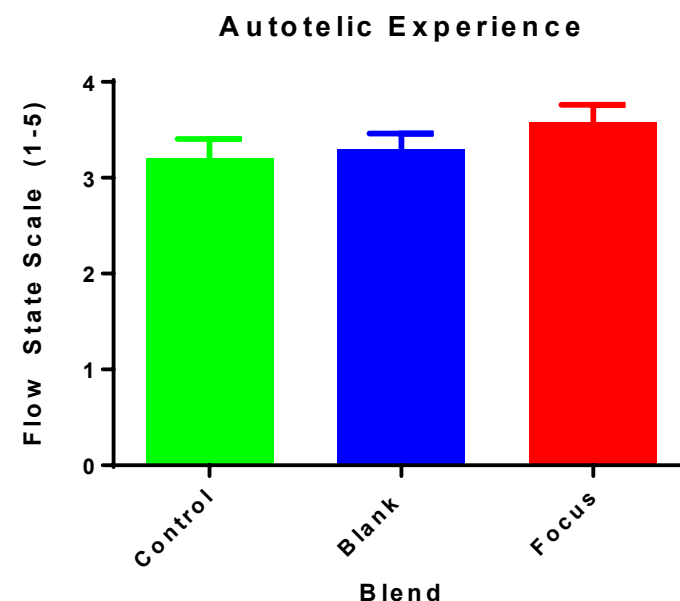
Participants are asked to reflect on Stroop and Arithmetic Fluidity Tests

Slight improvement in 3 of 9 flow state metrics



Results from FG 4B

N=17

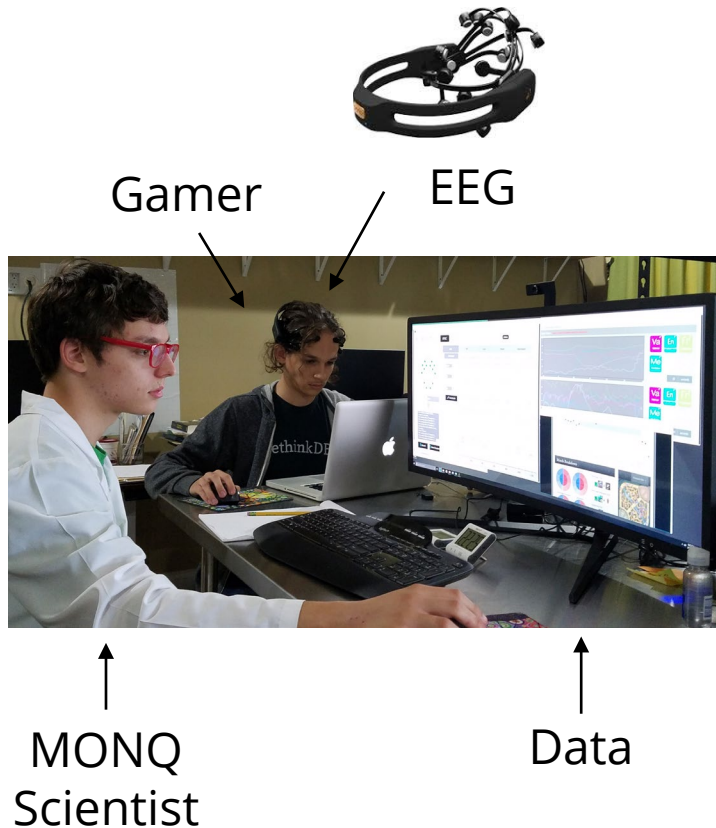


- Experience was extremely rewarding
- Enjoyed experience
- Wanted to recapture the feeling
- Experience left me feeling great

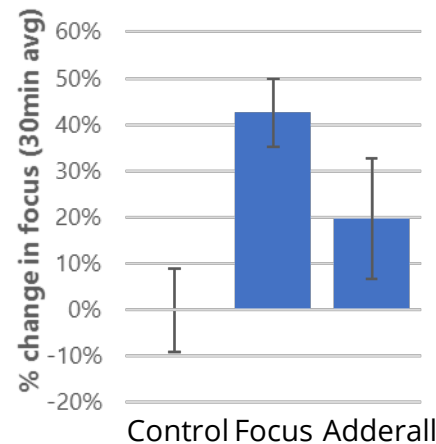
Performance: Focus improved online gaming scores



Focus MONQ increased EEG readings for focus and concentration which correlated with better game performance outcomes in real-time online play.

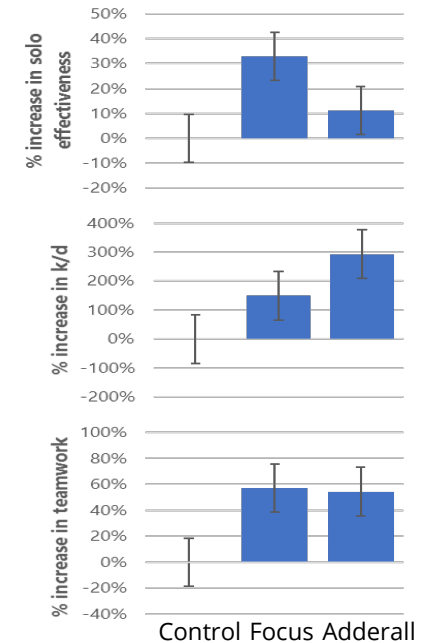


Biological measurements (EEG) showed increased focus



Results from internal testing

Gaming Performance Improved (League of Legends 10 match minimum)



Cognition: Verbal Fluency

The task involves reciting as many words out loud under a specific category in 60 seconds
 For example: all words that start with the letter S

Participants may not use proper nouns or repeat words. Numerous formulas and specific experimental designs must be used.

This requires parallel mental tasks

1. Sifting through vocabulary to find words
2. Using working memory to keep track of what's been said

n=17; p=.08 n.s.

Verbal Fluency Test

