neurozone®

RIVERSTONE PHYSICIAN STUDY

ELATION

AUGUST 2020

THE BEHAVIORAL CODE FOR **HIGH PERFORMANCE**

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EXECUTIVE SUMMARY

A total of 11 physicians completed the pre- and post-intervention assessments that consisted of the Neurozone Self-Assessment and the Mayo Well-Being Index (MWBI). The pre-assessment took place in December 2019 where each participant received a personalized report upon completion, as well as personalized coaching from the Elation team. The post-assessment took place between May and July, 2020.

The ages of participants ranged from 32 – 64, with a mean age of 43.36 (SD = 10.10). Medical specialties included Family medicine and Pediatrics. Only the data from physicians who completed both the pre- and post-assessments were included in the analyses.

The table below provides pre- and post-intervention scores. All Neurozone-related scores range from 0 (low) to 100 (high). The MWBI was calculated according to both the 7- and 9-item scales. Due to the small sample size, results from significance testing cannot be accepted due to insufficient statistical power and is therefore not reported on.

Driver/Outcome	Pre-Intervention	Post-Intervention	Score Difference
Exercise	58	66	+ 8
Nutrition	75	73	- 2
Sleep/Wake Cycle	65	63	- 2
Silencing the Mind	27	31	+ 4
Social Safety	82	87	+ 5
Goal-Directedness	77	82	+ 5
Collective Creativity	60	65	+ 5
Learning	76	76	0
Abstraction	72	80	+ 8
Executive Function	51	55	+ 4
Self-Leadership	71	76	+ 5
Innovation Capacity	68	71	+ 3
Learning Capacity	68	71	+ 3
Resilience	70	75	+ 5
Brain-Body Optimization Score	65	68	+ 3
MWBI 7-Item	3	2.1	- 0.9
MWBI 9-Item	2.82	1.64	- 1.18

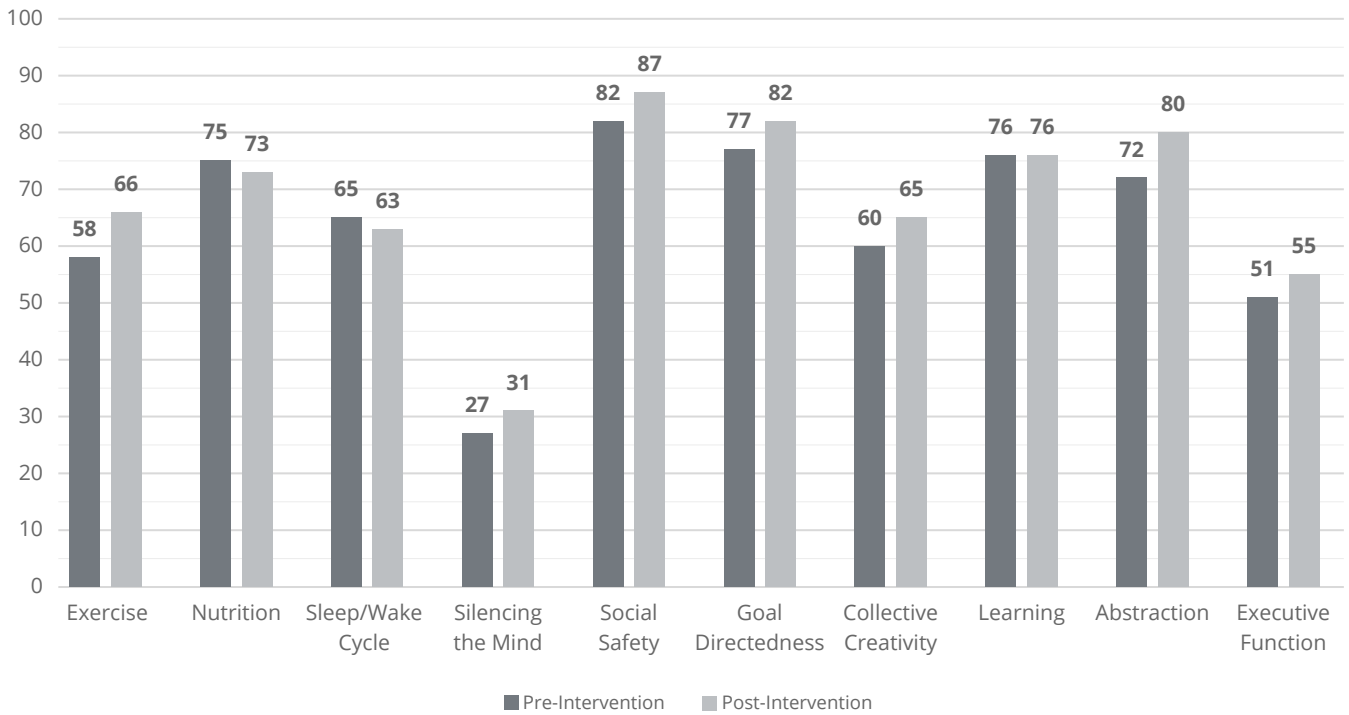THE BEHAVIORAL CODE FOR **HIGH PERFORMANCE**

Results show improvements across seven out of ten drivers (Exercise, Silencing the Mind, Social Safety, Goal Directedness, Collective Creativity, Abstraction, and Executive Function), while Learning remained unchanged at 76. The Nutrition and Sleep/Wake Cycle drivers exhibited small decreases between pre- and post-testing. All five Neurozone-related outcomes showed increases in optimization scores (Self-Leadership, Innovation Capacity, Learning Capacity, and Resilience). With regard to the MWBI, both the 7-item and 9-item scales exhibited a decrease in scores following the intervention. The MWBI results are indicative of reduced distress and increased well-being.
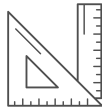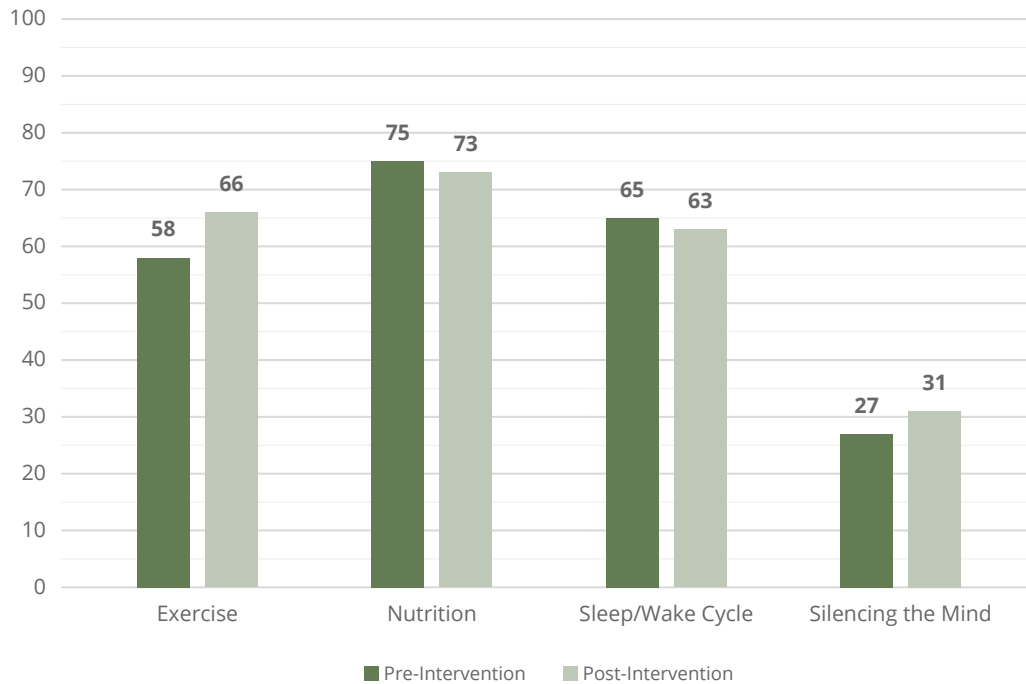
RESULTS

DRIVER OUTCOMES

The pre-post intervention results show improvements across seven out of ten drivers. These drivers include Exercise, Silencing the Mind, Social Safety, Goal Directedness, Collective Creativity, Abstraction, and Executive Function. Exercise and Abstraction exhibited the largest increase from 58-66 and 72-80, respectively. The Silencing the Mind driver remains the lowest ranking driver at 31, while Social Safety is the highest ranking driver at 87.

Pre-Intervention / Post-Intervention bar chart showing driver outcomes:

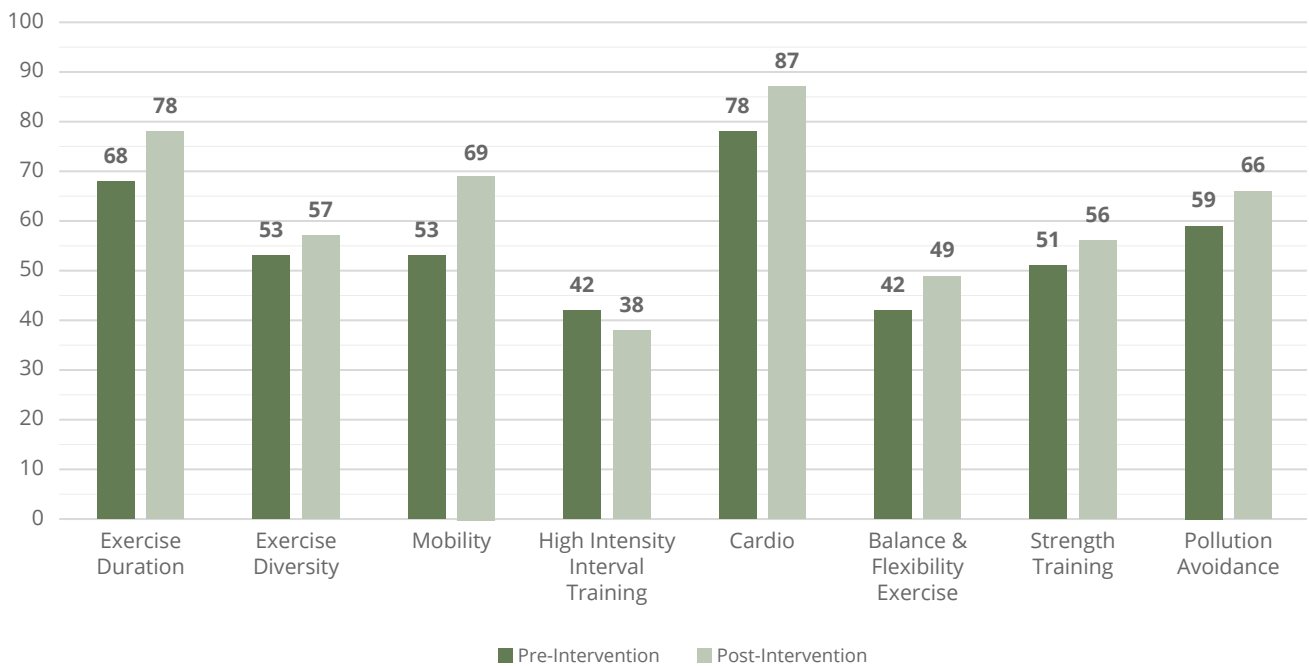| Driver	Pre-Intervention	Post-Intervention
Exercise	58	66
Nutrition	75	73
Sleep/Wake Cycle	65	63
Silencing the Mind	27	31
Social Safety	82	87
Goal Directedness	77	82
Collective Creativity	60	65
Learning	76	76
Abstraction	72	80
Executive Function	51	55

FOUNDATIONAL DRIVERS

Improvements were observed in two of the four Foundational drivers with Exercise exhibiting the largest increase. The Nutrition and Sleep/Wake drivers showed marginal decreases at post-testing. Nutrition has the highest optimization score at 73, while Silencing the Mind has the lowest score at 31.

Driver	Pre-Intervention	Post-Intervention
Exercise	58	66
Nutrition	75	73
Sleep/Wake Cycle	65	63
Silencing the Mind	27	31

EXERCISE

Category	Pre-Intervention	Post-Intervention
Exercise Duration	68	78
Exercise Diversity	53	57
Mobility	53	69
High Intensity Interval Training	42	38
Cardio	78	87
Balance & Flexibility Exercise	42	49
Strength Training	51	56
Pollution Avoidance	59	66

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RESULTS

NUTRITION

Category	Pre-Intervention	Post-Intervention
Continuous Energy	81	79
Dietary Balance	66	66
Fried Foods	91	91
Intermittent Fasting	73	61
Fruit & Vegetables	63	64
Caffeine Moderation	55	55
Water Consumption	70	67
Alcohol Moderation	91	82

■ Pre-Intervention ■ Post-Intervention

SLEEP/WAKE CYCLE

Category	Pre-Intervention	Post-Intervention
Sleep Duration	64	55
Medication Avoidance	94	94
Bedtime Consistency	61	64
Alarm Snooze Avoidance	36	36
Consumption before Bedtime	42	37
Nap	82	82
Weekend Bedtime Consistency	55	64
Sleep Position	64	67

■ Pre-Intervention ■ Post-Intervention

SILENCING THE MIND

Chart data (Pre-Intervention vs Post-Intervention):

Category	Pre-Intervention	Post-Intervention
Times a Week	29	35
Times a Day	15	12
StM Duration	27	42
Focused Attention	19	25
Open Monitoring	36	22
Deep Breathing	40	53
StM Timing	20	27
Noise Avoidance	59	80

■ Pre-Intervention   ■ Post-Intervention
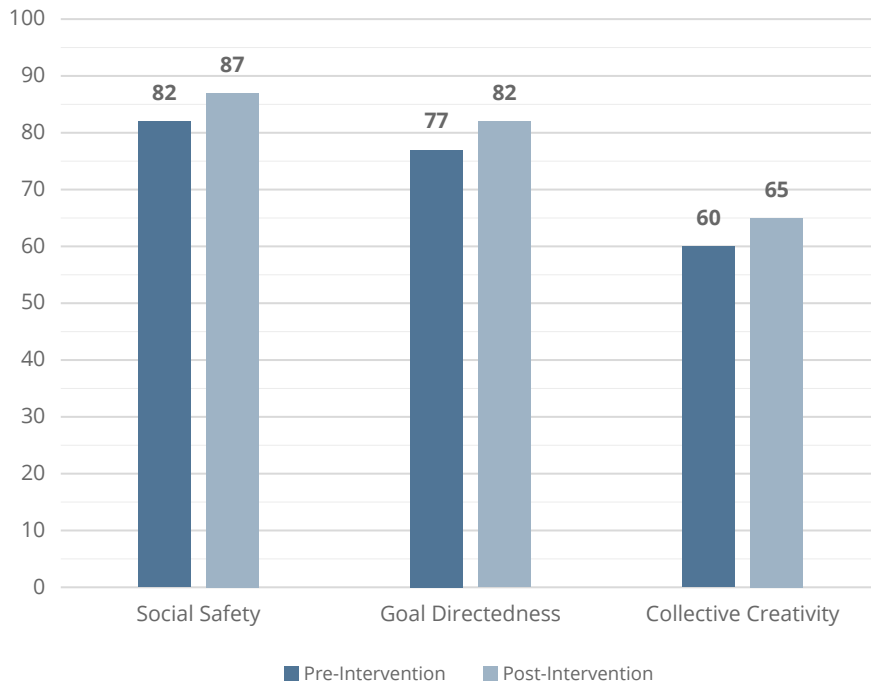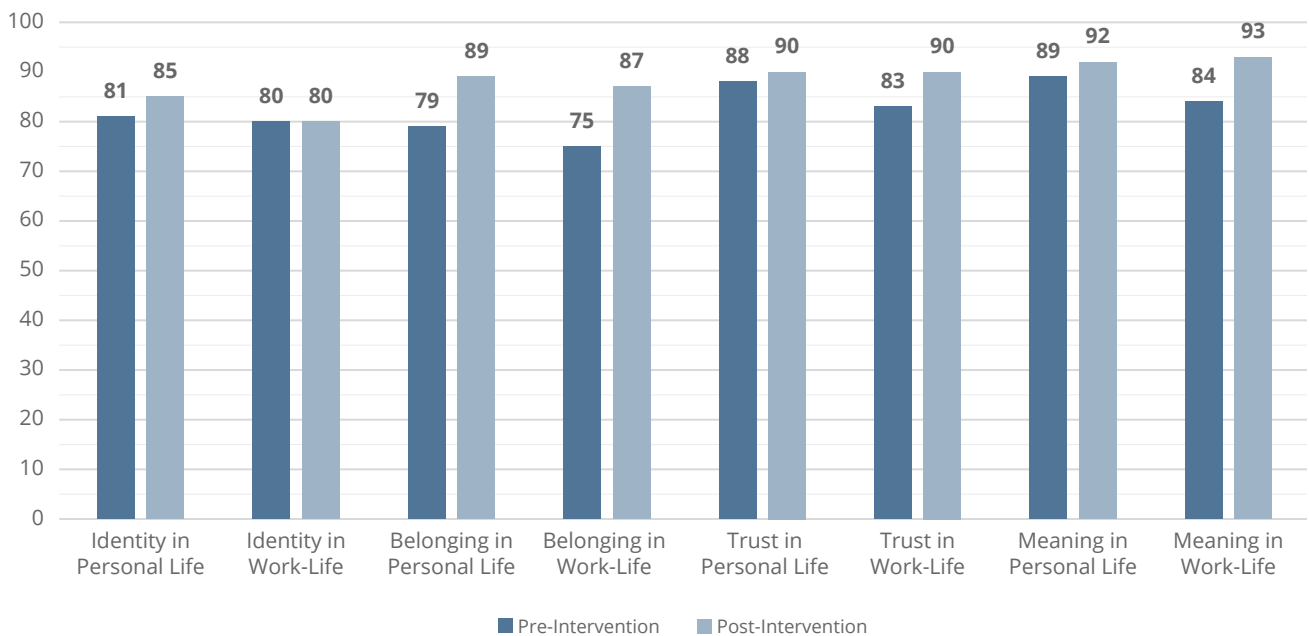
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EMOTIONAL DRIVERS

All three Emotional drivers showed large improvements – Social Safety increased from 82-87, Goal-Directedness from 77-82, and Collective Creativity from 60-65. Social Safety has the highest optimization score and Collective Creativity the lowest.
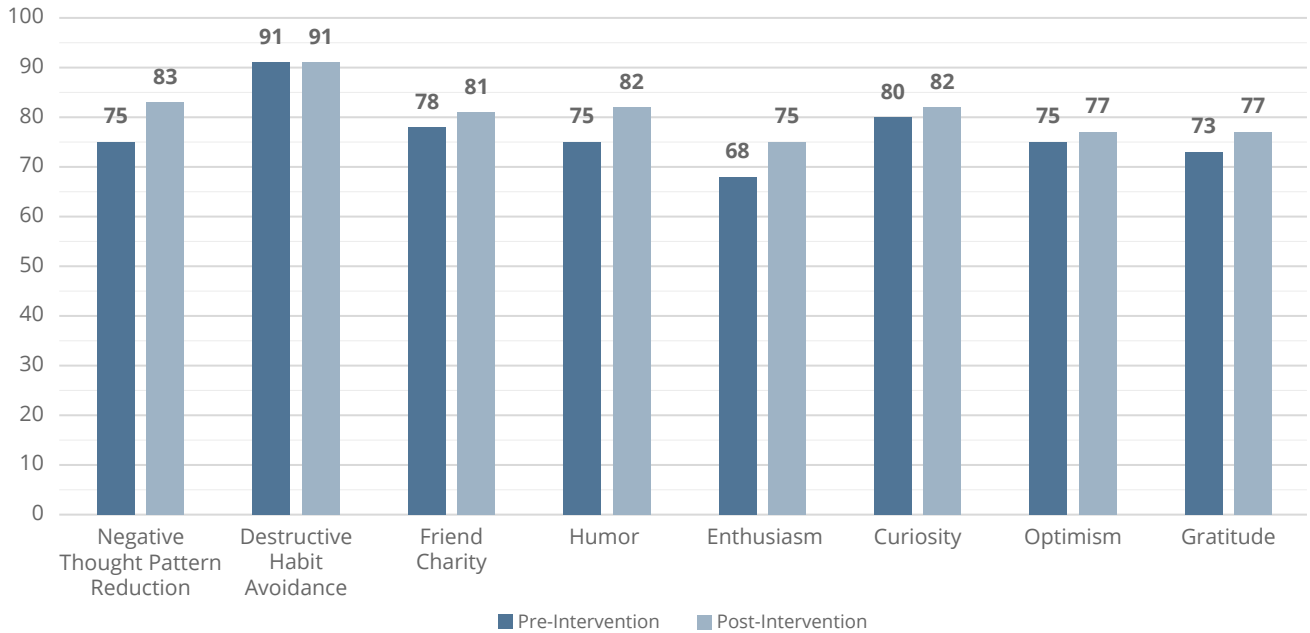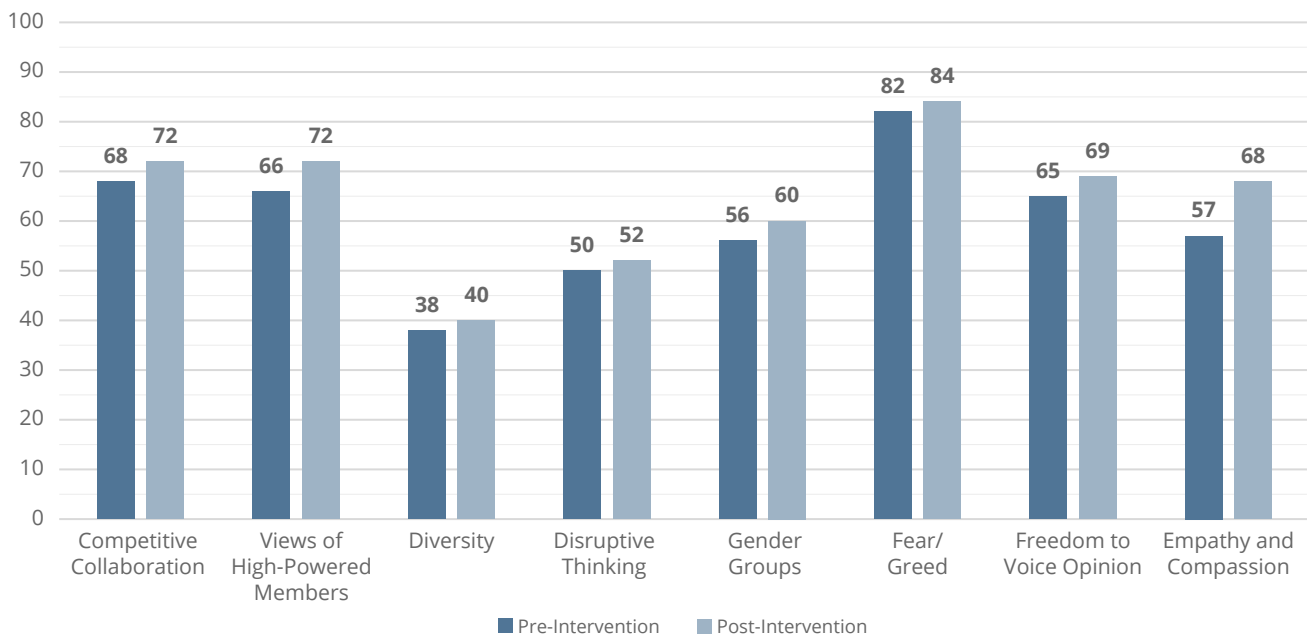

SOCIAL SAFETY

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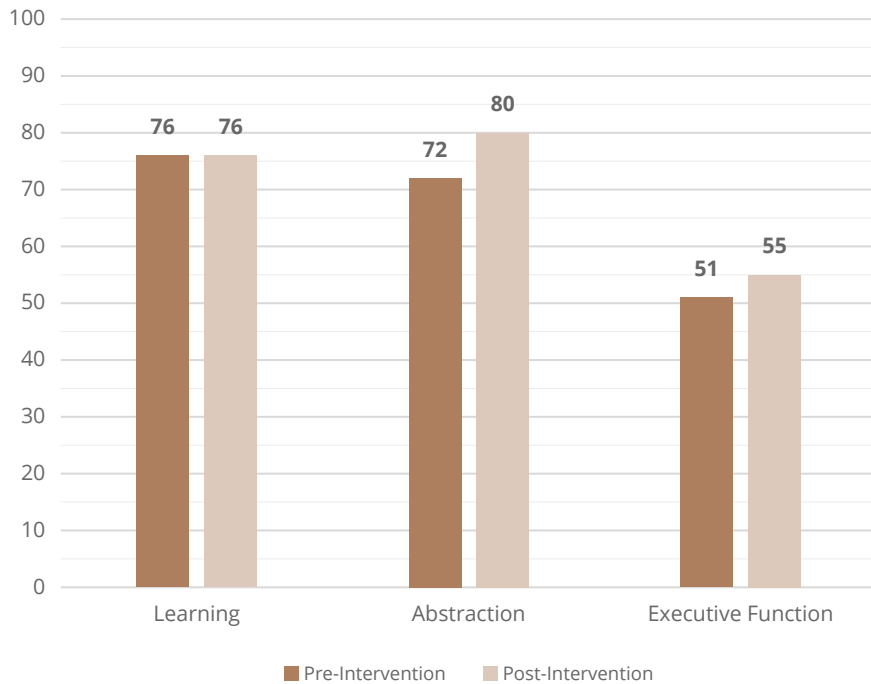THE BEHAVIORAL CODE FOR **HIGH PERFORMANCE**

RESULTS

GOAL-DIRECTEDNESS

Chart: Goal-Directedness (Pre-Intervention vs Post-Intervention)

Category	Pre-Intervention	Post-Intervention
Negative Thought Pattern Reduction	75	83
Destructive Habit Avoidance	91	91
Friend Charity	78	81
Humor	75	82
Enthusiasm	68	75
Curiosity	80	82
Optimism	75	77
Gratitude	73	77

COLLECTIVE CREATIVITY

Chart: Collective Creativity (Pre-Intervention vs Post-Intervention)

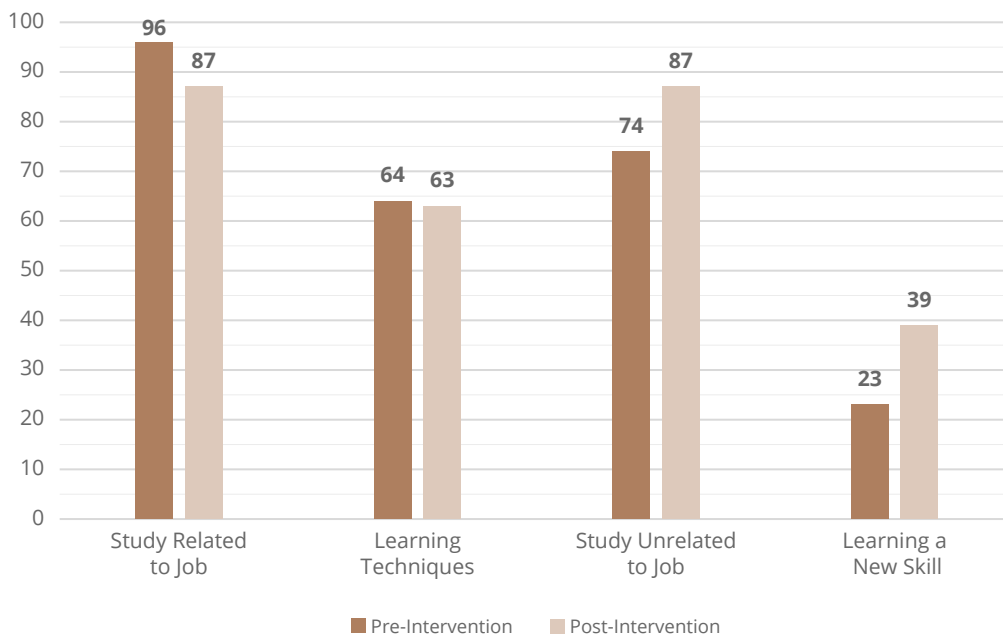| Category	Pre-Intervention	Post-Intervention
Competitive Collaboration	68	72
Views of High-Powered Members	66	72
Diversity	38	40
Disruptive Thinking	50	52
Gender Groups	56	60
Fear/Greed	82	84
Freedom to Voice Opinion	65	69
Empathy and Compassion	57	68

HIGHER-ORDER DRIVERS

Two out of three drivers (Abstraction and Executive function), showed moderate to large improvements in optimization scores from 72-80 and 51-55, respectively. Learning remained unchanged at 76 ranking as the second highest driver after Abstraction with an optimization score of 80.
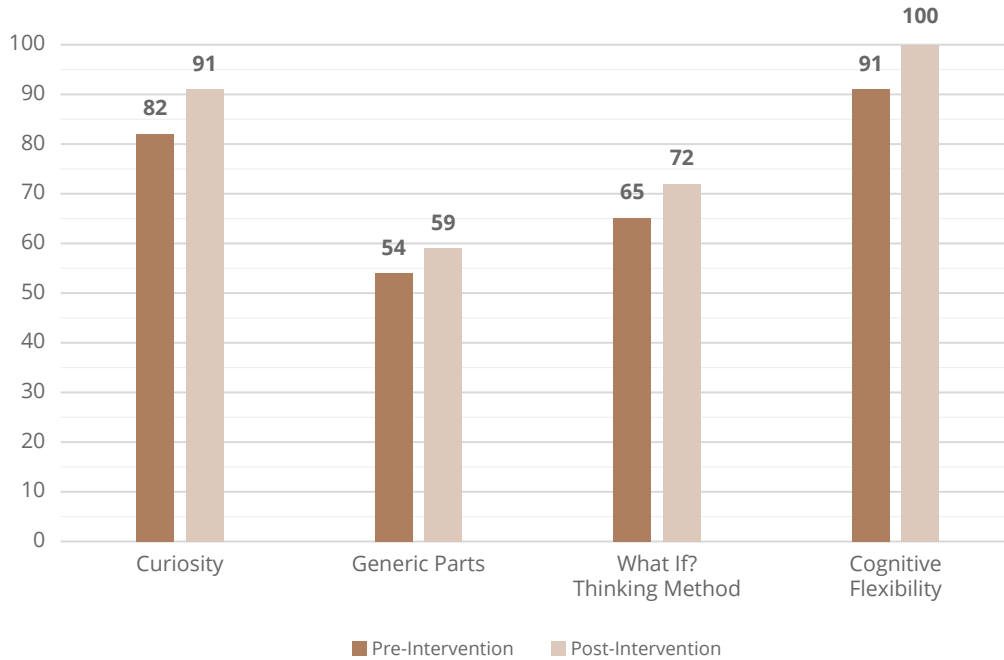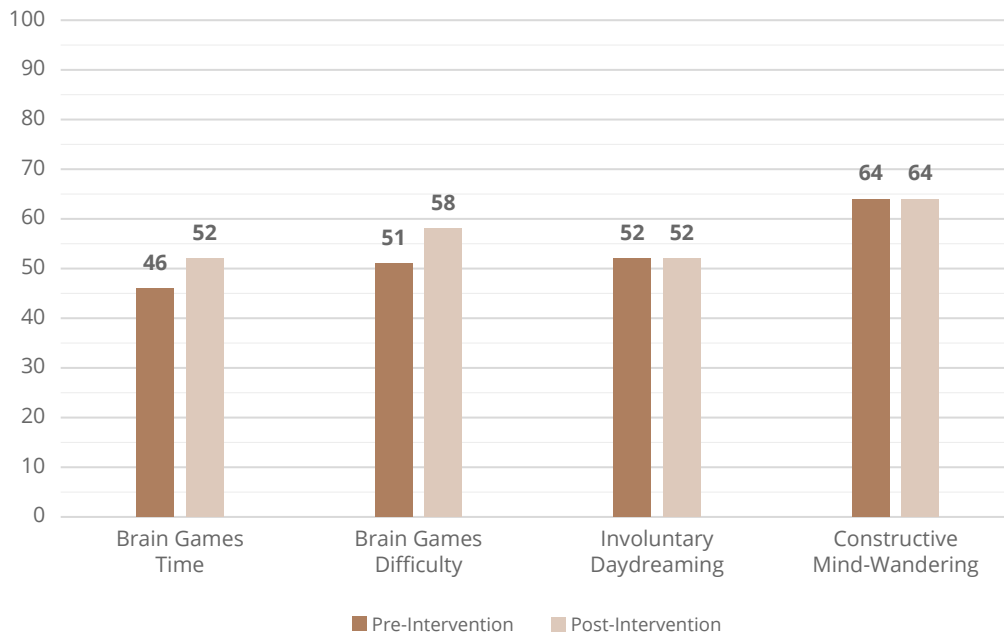

Pre-Intervention ■ Post-Intervention

⬡ LEARNING

Pre-Intervention ■ Post-Intervention

ABSTRACTION

Chart: Abstraction — Pre-Intervention vs Post-Intervention

Category	Pre-Intervention	Post-Intervention
Curiosity	82	91
Generic Parts	54	59
What If? Thinking Method	65	72
Cognitive Flexibility	91	100

EXECUTIVE FUNCTION

Chart: Executive Function — Pre-Intervention vs Post-Intervention

Category	Pre-Intervention	Post-Intervention
Brain Games Time	46	52
Brain Games Difficulty	51	58
Involuntary Daydreaming	52	52
Constructive Mind-Wandering	64	64

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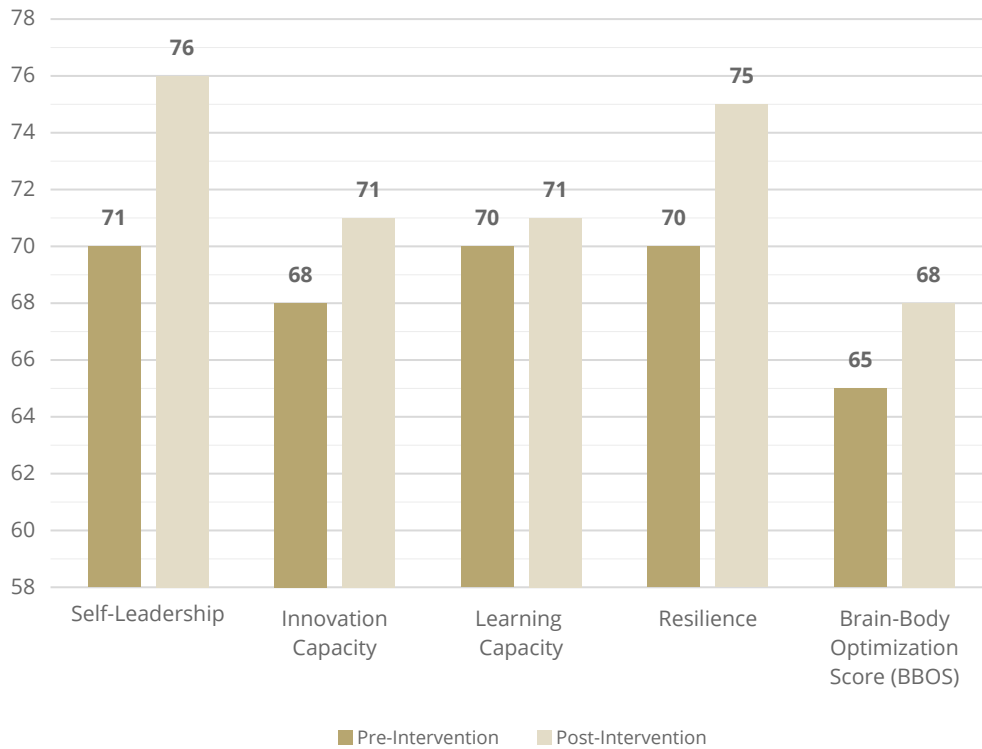
RESULTS

HIGH-PERFORMANCE OUTCOMES

All four High-Performance Outcomes demonstrated improvements, with Self-Leadership and Resilience exhibiting the largest increases from 71-76 and 70-75, respectively. The Brain-Body Optimization score also showed an increase from 65-68.

Pre-Intervention   Post-Intervention

SELF-LEADERSHIP   **INNOVATION CAPACITY**   **LEARNING CAPACITY**   **RESILIENCE**   **OPTIMIZED BRAIN/BODY SYSTEM**

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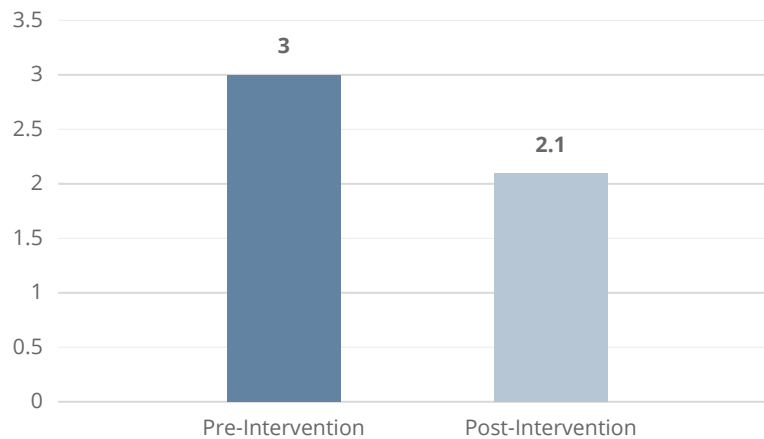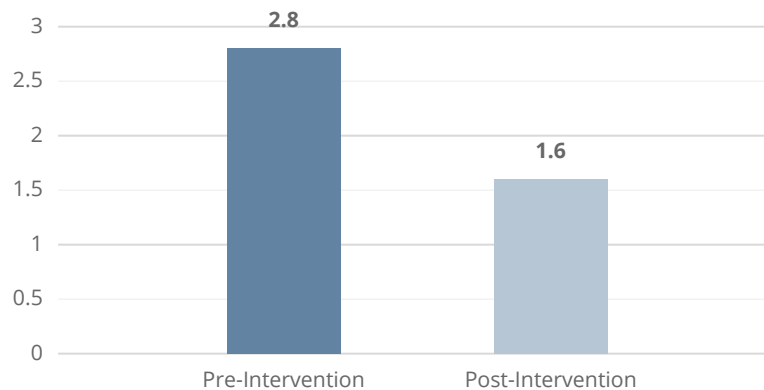
MAYO WELL-BEING INDEX

The MWBI was scored on a 0-7 scale, as well as on a -2-9 scale (7-item vs. 9-item index). Results show decreases in both instances from 3.00 to 2.10 in the case of the 7-item scale, and from 2.82 to 1.64 in the case of the 9-item scale. These results are indicative of reduced distress and increased well-being following the intervention.

Mayo Well-Being Index 7-Item Scale

Pre-Intervention	Post-Intervention
3	2.1

Mayo Well-Being Index 9-Item Scale

Pre-Intervention	Post-Intervention
2.8	1.6

KEY

Low burnout   0   1   2   3   4   5   6   7   High burnout
High well-being ←————————————————————→ Low well-being

MAYO CLINIC

CONCLUSION

The pre-post intervention results show that there were improvements across seven drivers (Exercise, Silencing the Mind, Social Safety, Goal-Directedness, Collective Creativity, Abstraction, Executive Function), as well as all five Neurozone-related outcomes (Self-Leadership, Innovation Capacity, Learning Capacity, Resilience, Brain-Body Optimization score). Results also showed a decrease in the MWBI scores. Taken together, these results provide strong evidence for the efficacy of the intervention by the Elation team to increase high-performance capacities and to reduce levels of distress in physicians.

Thank you for providing Neurozone with the opportunity to conduct this study. Please feel free to contact us should there be any questions or concerns.

Kind regards,
Neurozone® Reporting Team
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