1. Gender Equality White Paper C20 Policy Pack to the G20

2. Summary

Shifting large populations from a stressed survival mindset to a thriving and interconnected state is essential to overcoming pervasive challenges such as gender inequity and creating global well-being. When we are in a chronic state of stress or "survival mode," more than 1400 biochemical changes impact our physiology, including the part of the brain that perceives life events and reacts to them in a sub-optimal and biased way. The result is a cascade of neurological and social effects leading to power struggles, domination, aggression, violence, competition, self-over-other, and the very consciousness that perpetuates inequalities. In contrast, a growing body of research shows a strong and modifiable relationship between heart rate variability, emotional self regulation, and implicit bias. Through scalable education in emotional self regulation (e.g. heart rate variability coherence training), people can learn to deliberately generate and operate from feelings of appreciation, care, compassion, and connection. At low or no cost, this type of training optimizes human capacity and cognitive function, dissolves biases, promotes collaboration / mutual respect, and fosters innovative solution seeking. Neuroscience has revealed the unique role that emotional self-regulation and the heart play in our ability to access these benefits, which can be collectively referred to as "heart intelligence." Our proposed policy equips populations with tools to self-regulate, giving them access to heart intelligence and leading to improved health and well-being outcomes including reducing discrimination and healing paralyzing intergenerational trauma disproportionately impacting women and girls. The result? A huge cost savings to G20 nations and a more just and equitable society for all, where women, girls and other marginalized groups have more ubiquitous opportunities. By establishing structures for society to operate through heart intelligence, we can create a more empowered population in a more accessible and equitable world. This will reduce costs of inequities to individuals and nations and ultimately contribute to greater global well-being for all.

3. Introduction (Including References to Existing Key G20 Commitments in this area)

We are faced with numerous cycles of gender disparity, including lack of access to education leading to limited economic opportunities and poverty, making women and girls even more at risk in a culture of exploitation and gender-based violence. These cycles perpetuate and are passed down from one generation to the next, reinforcing existing gender bias and discrimination. The question we must ask is, how can we interrupt these negative cycles and achieve our G20 commitments to gender equality, particularly in light of the COVID-19 barriers that have exacerbated the problem?

As stated in the commitments below from 2021 and 2022, we recognize and honor that the G20 countries are vitally focused and clearly intended in their gender equity goals, even as COVID-19 created major setbacks to the achievement of those goals:

> From the G20 Leaders' Declaration released on November 21, 2021:
> "We reaffirm our commitment to gender equality and emphasize the pivotal role of women's and girls' empowerment and leadership at all levels for inclusive and sustainable development. We commit to put women and girls, who have been disproportionately affected by the pandemic, at the core of our efforts to build forward better. We will work on key factors such as equal access to education and opportunities, including in STEM sectors, the promotion of women's entrepreneurship and leadership, the elimination of gender-based violence, the enhancement of social, health, care and educational services, the overcoming of gender stereotypes, and the uneven distribution of unpaid care and domestic work. We commit to implement the G20 Roadmap Towards and Beyond the Brisbane Goal and to rapidly enhance the quality and quantity of women's employment, with a particular focus on closing the gender pay gap."
>
> From The White House Briefing Room, G20 Bali Leaders' Declaration, 11/16/2022:
> "As women and girls continue to be disproportionately affected by the COVID-19 pandemic and other crises, we reaffirm our commitment to put gender equality and women's empowerment at the core of our efforts for an inclusive recovery and sustainable development."
> https://www.whitehouse.gov/briefing-room/statements-releases/2022/11/16/g20-bali-leaders-declaration/
>
> From the G20 Leaders' Declaration 2022:
> "We commit to implement the G20 Roadmap Towards and Beyond the Brisbane Goal, foster financial inclusion and access to digital technologies, including to address the unequal distribution in paid and unpaid care and domestic work, with a focus on closing the gender pay gap. We commit to the elimination of gender-based violence, the enhancement of social, health, care and educational services, and the overcoming of gender stereotypes. We will continue to advance women's and girls' equal access to

inclusive and quality education, including participation in STEM education, women entrepreneurship through MSMEs, and women's and girls' access in leadership positions. We will promote quality of life for women in rural areas and women with disabilities."

These are admirable goals. However, merely investing financially in initiatives such as girl's education, access to STEM opportunities, leadership programs, digital literacy and inclusion, and quality of life for women in rural areas and disabilities is not enough to achieve these goals. While it is crucial to fund such programs, scalable strategies are needed to build capacity for learning readiness among women and girl children, and to foster measurable empowerment, confidence and healing from the paralyzing trauma of prior oppression. Addressing gender-based violence, stereotyping, and discrimination also requires the adoption of new behaviors, shifting implicit bias perceptions, changing attitudes and choices, and adding new skills for changing systemic oppression across large populations. Emotional self-regulation, (such as that facilitated by physiological coherence and applied heart intelligence skills), has been proven to effectively and efficiently achieve these outcomes and more.

Emotional self-regulation tools result in scientifically proven health, performance, and social benefits including optimizing brain function, enhancing impulse control, reducing violence, increasing self and situational awareness, self esteem, and increasing prosocial, environmentally sustainable behaviors. By prioritizing emotional self-regulation training, we can close opportunity and accessibility gaps based on gender, socioeconomic status and other factors, dramatically reducing the financial and humanistic costs of inequality, violence, and disease. For example, childhood psychological problems, worsened by an inequitable environment and stress, lead to lower educational achievements and decreased likelihood of working and earning as adults. This leads to a 20% reduction in family income or $10,400 per year, with $18,000 less in family household assets, resulting in a total lifetime economic cost of 2.1 trillion dollars for all affected individuals. The cost of burnout, absenteeism, and turnover of healthcare professionals, exacerbated by gender bias and discrimination in the workplace, is estimated to be between $4.4 billion and $6.3 billion annually in the US, $53 million in Australia, and $167 million in Canada. With emotional self regulation training for nurses (80% women), average size hospitals in G20 countries have been shown to save $1M+ in reduced turnover alone in their first year of implementation, alongside reductions in medical error and employee sick days. Studies have estimated the potential cost savings of emotional self-regulation programs for first responders, with a Canadian study estimating savings of $1.7 billion annually. Given the size of the G20 economies, the beneficial financial impact across all sectors of the economy resulting from the implementation of this policy and the training it recommends amplifies rapidly.

The application of this policy across large populations creates a world where everyone has an opportunity to lead a happy, healthy, and fulfilling life and where the world functions more sustainably, equitably, and prosperously with better outcomes for all. When implemented by member nations, these tools will be a true vehicle for the G20 commitment to "...continue to promote policies and measures that enhance women's economic empowerment, reduce

gender-based discrimination and violence, and eliminate barriers to women's full and equal participation in the economy and in society."

4. Main body of White Paper 300 words MAX
CHALLENGE:

Three challenges perpetuate inequality: unequal access to education and advancement opportunities, bias leading to discrimination, and a social paradigm that values individualism over collective well-being. Emotional self-regulation education can help overcome these challenges by providing access to heart and higher brain intelligence, increasing self/situational awareness, and promoting collaboration, diminishing implicit bias, aiding in identifying and addressing discriminatory structures and promoting a shift towards valuing diverse perspectives. By implementing the proposed policies, individuals and communities worldwide can work towards a thriving and interconnected future, where discrimination and inequality are no longer pervasive.

POLICY RECOMMENDATION:

Global Well-Being: Make emotional self-regulation training mandatory in public schools, government programs, and public and licensed positions. Integrate these tools into treatment guidelines, emergency response protocols and regulatory assessments. Allocate resources to further investigate their impact on human, organizational, social, and global well-being.
We strongly recommend that evidence based and scientifically proven, peer reviewed researched methods and tools, (such as heart rate variability self-regulation, biofeedback, mindfulness, meditation, interconnectivity and other culturally appropriate training) be used for this purpose.

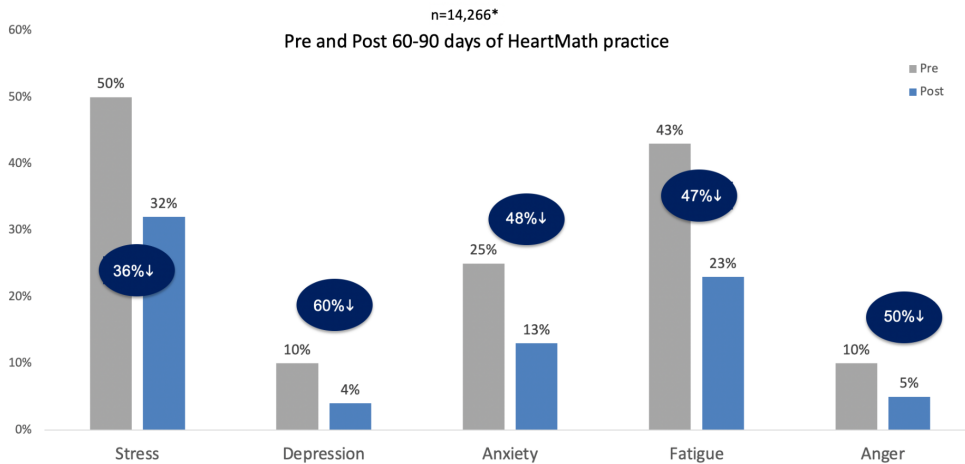**CASE STUDY DEMONSTRATING FEASIBILITY AND RESULTS:**
Emotional self-regulation tools from HeartMath have been applied by millions of people across 100+ countries, in diverse cultures and environments, and in various sectors including education, government, military, healthcare, first responders, CSOs/NGOs, athletics, food chain suppliers, financial institutions, et al. The approach demonstrates positive outcomes for both cost savings and global well-being across gender divides, as evidenced by numerous case studies. 168 organizations in 7 countries involving 14,266 people, 11,974 (83.9%) female, showed:

- ↓ stressful emotions such as anxiety, depression, anger: 40-60%

- ↑ emotional well being (peace, happiness, motivation): 30-50%

- ↑ cognitive function: 50%-60% higher test scores in high school students (higher ratio improvement in girls)
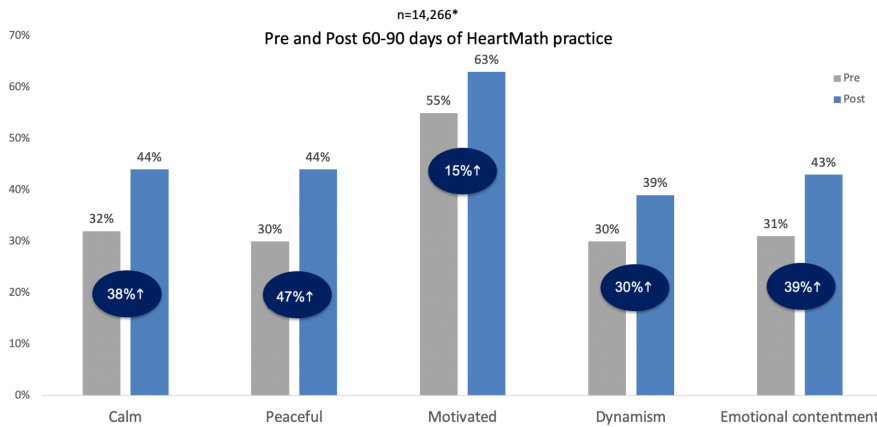
A Sample of Organizations that Implemented Tools from +♥ HeartMath.

Improvements in Mental and Emotional Well-Being

n=14,266*
Pre and Post 60-90 days of HeartMath practice

Legend:
- Pre (gray)
- Post (blue)

Category	Pre	Post	Reduction
Stress	50%	32%	36%↓
Depression	10%	4%	60%↓
Anxiety	25%	13%	48%↓
Fatigue	43%	23%	47%↓
Anger	10%	5%	50%↓

Improvements in Mental and Emotional Well-Being 2

n=14,266*
Pre and Post 60-90 days of HeartMath practice

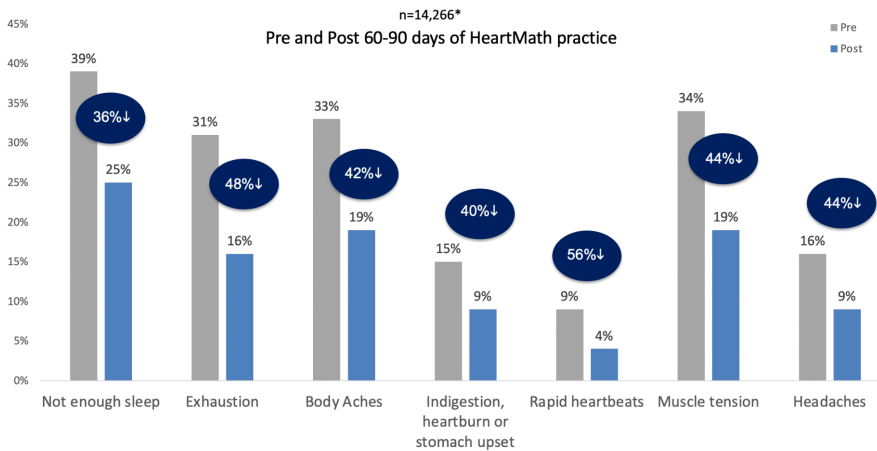| Category	Pre	Post	Change
Calm	32%	44%	38%↑
Peaceful	30%	44%	47%↑
Motivated	55%	63%	15%↑
Dynamism	30%	39%	30%↑
Emotional contentment	31%	43%	39%↑

HeartMath Institute 1. POQA-R data from Jan 2003 to Dec 2020. Unpublished raw data. HeartMath Institute. 2021. *Percent of individuals responding "often to always"

HeartMath
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Improvements in Physical Well-Being

n=14,266*
Pre and Post 60-90 days of HeartMath practice

Pre
Post

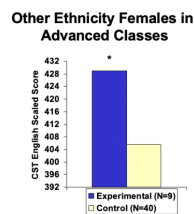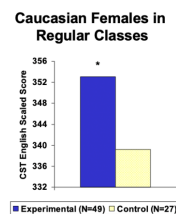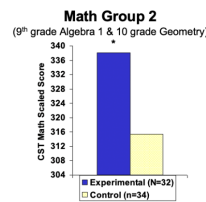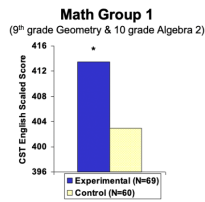| Category	Pre	Post	Change
Not enough sleep	39%	25%	36%↓
Exhaustion	31%	16%	48%↓
Body Aches	33%	19%	42%↓
Indigestion, heartburn or stomach upset	15%	9%	40%↓
Rapid heartbeats	9%	4%	56%↓
Muscle tension	34%	19%	44%↓
Headaches	16%	9%	44%↓

HeartMath Institute 1. POQA-R data from Jan 2003 to Dec 2020. Unpublished raw data. HeartMath Institute. 2021. *Percent of individuals responding "often to always"

HeartMath
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IMPROVEMENTS IN COGNITIVE CAPACITY/WELL-BEING

HeartMath Institute

Math Group 1
(9th grade Geometry & 10 grade Algebra 2)

CST English Scaled Score

Experimental (N=69)
Control (N=60)

Math Group 2
(9th grade Algebra 1 & 10 grade Geometry)

CST Math Scaled Score

Experimental (N=32)
Control (n=34)

Caucasian Females in Regular Classes

CST English Scaled Score

Experimental (N=49)
Control (N=27)

Other Ethnicity Females in Advanced Classes

CST English Scaled Score

Experimental (N=9)
Control (N=40)

ANCOVA adjusted means * $P < 0.05$

CLOSING:
Emotional self-regulation education is the key to unlocking heart intelligence for large populations, leading to improved health and well-being and reduced discrimination against women, girls and other marginalized groups. Neuroscience has shown that emotional self-regulation techniques (like heart rate variability self regulation training) play a unique role in accessing these benefits, by generating feelings of collaboration, care, and compassion, and dissolving biases. By equipping populations with these tools, we can create a more just and equitable society where marginalized groups have more opportunities, aligning with existing G20 commitments to gender equality and women's empowerment, with enormous long and short term benefits to the economies of those countries. Through implementation of this policy, we can empower all members of our diverse population, creating a more equitable and prosperous world and greater global well-being.

If you have questions or would like additional information contact us at:
support@heartambassadors.com

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