

Abstract 1: Stress Neurophysio-Pathological Theory: Clinical Exploration of a Novel Acupuncture Method for Trauma and Stress-Related Conditions in 490 Patients at Chiren Therapy Centre, Limerick, Ireland (September 2019 – September 2023)

Objectives:

1. Explore neurophysiological pathways underlying stress-related conditions.
2. Establish a standardized assessment methodology for evaluating trauma and stress in patients.
3. Assess the efficacy of a novel acupuncture treatment method over five treatments.

Background:

This study represents the culmination of over 40 years of accumulated knowledge and experience. It has been shaped by two main aspects: first, extensive work in developing surveillance systems for epidemics under challenging and traumatic conditions; and second, the exploration and utilization of acupuncture as an effective method of pain relief, despite its lack of evidence and divergence from Western medical conventions. Upon my arrival in Ireland in the year 2000, everything changed. The reasons why people were getting sick are mostly unknown, with stress and traumas being significant risk factors. This realization sparked the need to develop an information system that could facilitate epidemiological understanding and validate potential interventions. This information system needed to offer graphical clarity and consistency to quantify trauma stress events and assess the impact of each treatment. With the assistance of a computer engineer, my son and co-author Ramon, in 2019, we began developing an informatic system called "Trauma Stress Relief" (TSR). This implied the need to understand trauma-stress through the best data collection methods, different approaches to quantify it, identify interventions, and develop reliable methods for data collection. All of this was facilitated by being able to introduce this methodology into my own clinical practice over the years. To address this need, we developed two novel indicators: 'Patient Energy Scale' (PE) and 'Stress Anxiety Spectrum' (SAS). The motivation behind the first indicator was to quantify a common complaint from patients regarding the lack of energy, tiredness, or fatigue. The second indicator aims to quantify the spectrum of symptoms commonly exhibited by patients.

Stress Neurophysio-Pathological theory: Deeply rooted on Diathesis–stress models, this work is based on two neurophysiological assumptions. First, any traumatic or stressful event will activate the complex sympathetic reaction of fight or flight. This is mediated by hypothalamic-pituitary-adrenal axis (HPA) producing stress hormones, leading by adrenaline and cortisol. Stress exposure overtime increases the levels of these hormones. This accumulative effect can generate symptoms related to prolonged exposure to stress hormones. Second, there is the reported effect of acupuncture on the autonomic nervous system. Many studies describe acupuncture's effect on central autonomic

regulation, often simulating a parasympathetic reaction of rest and repair. However, this effect remains under investigation, and more statistical evidence is needed. Based on this assumption, the main treatment protocol involves a three-point combination. The first two points are located on each hand in an area described by Master Tung as Chong zi 22.01, and the third point is Yintang (EX-HN 3), known for its mentally stabilizing effect in Traditional Chinese Medicine (TCM). The rationale for this selection is grounded in the observed outcomes following needle insertion at these points. Patients often report sensations of clarity, relaxation, and a reduction in pain levels, with pain sometimes disappearing almost immediately. Consequently, this combination has become a standard protocol used in 100% of patients, regardless of their chief complaint. Furthermore, this novel acupuncture model diverges from the Traditional Chinese Medicine concept of energy or Qi regulation. Instead, it focuses on harnessing the neurophysiological power to induce relaxation and pain relief.

Methods:

Utilizing data from the TSR system at Chiren Therapy Centre in Limerick, Ireland, spanning from September 2019 to September 2023, we selected data from patients who completed six visits. The first visit was defined as the baseline assessment, followed by five subsequent follow-up visits. During these visits, initial assessments captured patients' chief complaints, which were subsequently classified and recorded according to the International Classification of Diseases version 11 (ICD-11). All patients received treatment targeting specific body points independently of their chief complaint, systematically in every treatment session. In alignment with guidelines from the Diagnostic and Statistical Manual for Mental Disorders (DSM-5), a comprehensive list of 40 symptoms associated with anxiety and stress was compiled. The intensity of each symptom was gauged on a scale of 0 to 10, contributing to the calculation of the Stress-Anxiety Spectrum (SAS). Additionally, patients self-reported their experiences using the Hospital Anxiety and Depression Scale (HADS) adjusted to scale 0 to 100 and the Patient Energy Scale (PE), scaled from 0 to 100. Statistical analyses, including descriptive and multivariate techniques, were performed using Oracle Analytics and the Kruskal-Wallis test in SPSS version 28.

Findings:

The analysis involved 490 patients diagnosed with the seven most prevalent ICD-11 codes (Table 1). Notably, there was a consistent improvement in scores across all indicators per visit (Figure 1, Table 2). This trend revealed significant differences ($p < 0.000$) across the weeks for SAS, PE, HADS (Depression, Anxiety), and all specific symptoms, without exception, as indicated by the Independent-Samples Kruskal-Wallis Test (Table 3). The symptoms intensity chart showed that tiredness, stress, and racing thoughts were the most intense symptoms, with a significant reduction observed at visit number 6 (Figure 2).

Interpretation:

The results not only highlight the efficacy of the novel acupuncture treatment in alleviating trauma-related stress symptoms but also emphasise the significance of the Neurophysio-pathological theory in elucidating the underlying mechanisms. The observed consistent improvement in PE scores, alongside reductions in SAS, HADS, and specific symptom scores, provides statistical support for the theory's premise. By targeting neurophysiological pathways associated with stress response, the acupuncture treatment appears to induce relaxation and pain relief, aligning with the theory's principles. These findings highlight the potential of integrating neurophysiological insights into acupuncture practice, offering a more targeted and effective approach to managing trauma and stress-related conditions. However, further research is warranted to delve deeper into the specific neurophysiological mechanisms involved and validate the theory's applicability across diverse clinical settings.



References

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Figure 1: Distribution of Stress anxiety spectrum (SAS), HADS and, perceived energy (PE) in 490 patients attending Chiren Therapy Centre, Limerick, Ireland, September 2019 – September 2023.

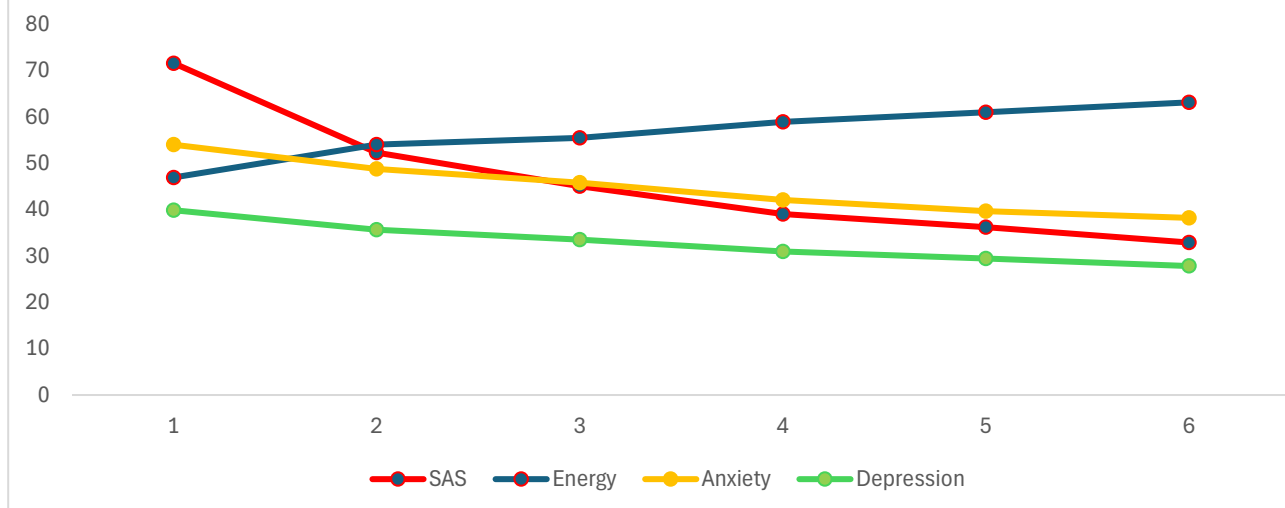


Figure 2: Comparison of Intensity of top 15 Stress Anxiety Symptoms at Visits 1 and 6: Analysis of 467 Patients at Chiren Therapy Centre, Limerick, Ireland (September 2019 – September 2023).

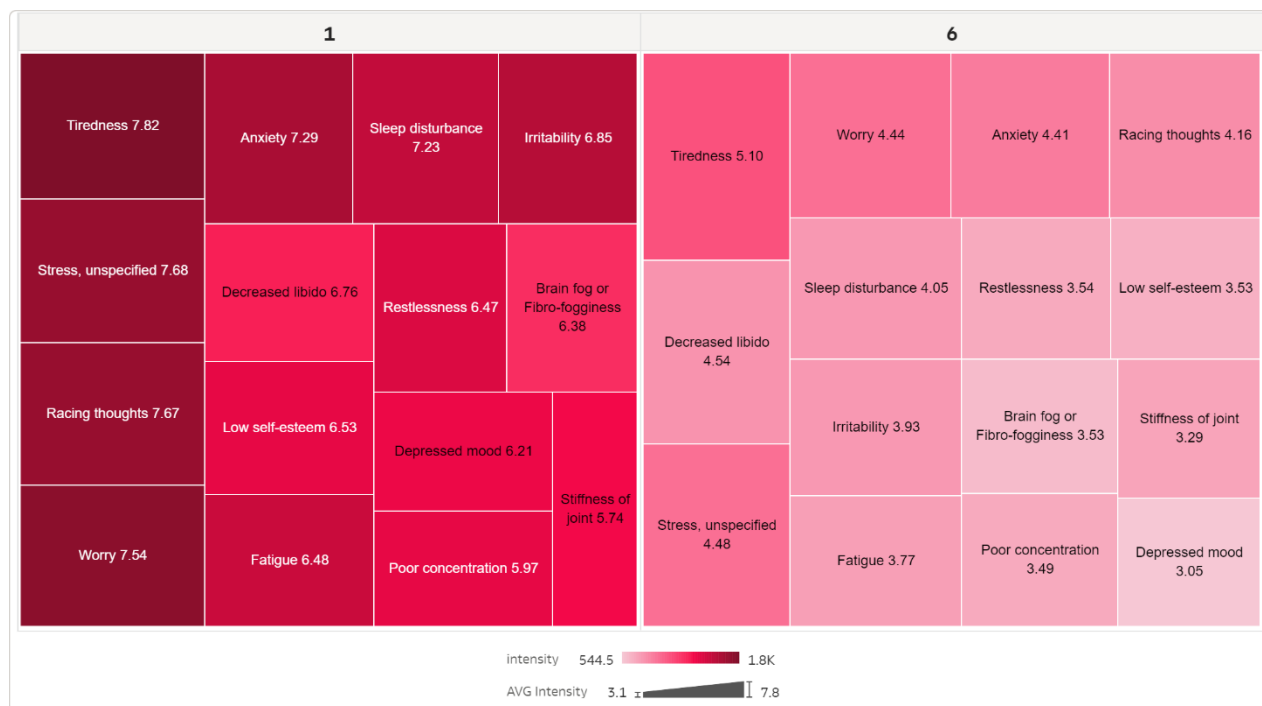


Table 1: Distribution of 490 patients by International Classification of Diseases version 11 (ICD11) at Chiren Therapy Centre, Limerick, Ireland, September 2019 – September 2023.

ICD 11 code	Total
MG30-Chronic pain	185
ME84-Spinal pain	75
6B00-Generalised anxiety disorder	73
ME86-Symptom or complaint of a body part	62
QE01-Stress, not elsewhere classified	44
RA02-Post COVID-19 condition	28
6A73-Mixed depressive and anxiety disorder	23
Grand Total	490

Table 2: Temporal Distribution of Stress Anxiety Spectrum (SAS), Perceived Energy (PE), Hospital Anxiety Depression Scale (HADS) averages Across Six Visits: Analysis of 490 Patients at Chiren Therapy Centre, Limerick, Ireland (September 2019 – September 2023).

Visits	SAS	Energy	HADS	
			Anxiety	Depression
1	71.65	46.97	10.81	7.98
2	52.36	54.10	9.76	7.14
3	45.08	55.55	9.17	6.71
4	39.09	58.99	8.43	6.20
5	36.22	61.07	7.94	5.89
6	32.93	63.19	7.65	5.57

Table 3: Report of Null Hypothesis: Distribution of indicators and symptoms is the same across six visits. Statistical Test: Independent-Samples Kruskal-Wallis. Chiren Therapy Centre, Limerick, Ireland, September 2019 – September 2023.

Hypothesis Test Summary				
		Null Hypothesis	Sig. ^{a,b}	Decision
		Indicators		
1		Energy	0.000	Reject the null hypothesis.
2		HADS Anxiety	0.000	Reject the null hypothesis.
3		HADS Depression	0.000	Reject the null hypothesis.
4		SAS	0.000	Reject the null hypothesis.
		Symptoms		
1	MB24.3	Anxiety	0.000	Reject the null hypothesis.
2	MB20.2	Brain fog or Fibro fogginess	0.000	Reject the null hypothesis.
3	ME05.0	Constipation	0.000	Reject the null hypothesis.
4	MB22.1	Decreased libido	0.000	Reject the null hypothesis.
5	MB24.5	Depressed mood	0.000	Reject the null hypothesis.
6	MB48.Z	Dizziness	0.000	Reject the null hypothesis.
7	9A10.Z	Dry eyes	0.000	Reject the null hypothesis.
8	DA02.1	Dry mouth	0.000	Reject the null hypothesis.
9	MD36.Y	Dry throat	0.000	Reject the null hypothesis.
10	EE00.Z	Excessive sweating	0.000	Reject the null hypothesis.
11	MG22	Fatigue	0.000	Reject the null hypothesis.
12	MB24.A	Fear	0.000	Reject the null hypothesis.
13	MG25	Feeling ill	0.000	Reject the null hypothesis.
14	MB26.7	Feeling unfairly treated by others	0.000	Reject the null hypothesis.
15	8A8Z	Headache disorders	0.000	Reject the null hypothesis.
16	7A0Z	Insomnia disorders	0.000	Reject the null hypothesis.
17	MB24.C	Irritability	0.000	Reject the null hypothesis.
18	MF50.2Y	Irritable bladder and or bedwetting	0.000	Reject the null hypothesis.
19	DD91.OZ	Irritable bowel syndrome	0.000	Reject the null hypothesis.
20	MB28.9	Low self esteem	0.000	Reject the null hypothesis.
21	MD11.9	Nasal congestion	0.000	Reject the null hypothesis.
22	MB40.1	Pain during light touch on the skin	0.000	Reject the null hypothesis.
23	MG30.1	Pain head to toes	0.001	Reject the null hypothesis.
24	MC81.2	Palpitations	0.000	Reject the null hypothesis.
25	MB23.H	Panic attack	0.000	Reject the null hypothesis.
26	MC40	Plugged feeling of the ear	0.002	Reject the null hypothesis.

27	MB21.A	Poor concentration	0.000	Reject the null hypothesis.
28	QD83.1	Prolonged grief	0.000	Reject the null hypothesis.
29	6B42	Racing thoughts	0.001	Reject the null hypothesis.
30	MB21.B	Restlessness	0.000	Reject the null hypothesis.
31	MB24.F	Self-harming ideas	0.000	Reject the null hypothesis.
32	MD11.5	Shortness of breath	0.000	Reject the null hypothesis.
33	MG41	Sleep disturbances	0.000	Reject the null hypothesis.
34	ME85	Stiffness of joint	0.000	Reject the null hypothesis.
35	DD90.3	Stomach upset indigestion heartburn	0.000	Reject the null hypothesis.
36	6B4Z	Stress unspecified	0.000	Reject the null hypothesis.
37	ME86.3	Symptom or complaint of the chest	0.000	Reject the null hypothesis.
38	MB22.7	Tiredness	0.000	Reject the null hypothesis.
39	8A04.Z	Tremors	0.000	Reject the null hypothesis.
40	MB24.H	Worry	0.000	Reject the null hypothesis.