



Common Stress Profiles in Adults Utilizing Bilateral Alternating Stimulation Tactile to Reduce Somatic and Cognitive Distress



Emily Kade, MA,^{1,2} Rebecca Bridges, MA,^{1,2} Rachel Robins, MC,^{1,2}
 Amy Serin PhD,² Robbie Wong, BA,¹ Bianca Boling, BA,¹
 Midwestern University¹ Serin Center²

Abstract

The purpose of this archival analysis was to assess differences in ratings of subjective units of distress (SUD) and body sensation (BS) following the application of bilateral alternating stimulation tactile (BLAST). Further, stress profiles via survey data were conducted. Pre and post subjective distress levels and body sensations significantly reduced following BLAST. Most participants (48%) reported an "Overwhelmed" profile.

Background

- Bilateral alternating stimulation in tactile form (BLAST) is a non-invasive, somatosensory-based methodology that has been found to significantly reduce subjective feelings of stress up to 62% and physiological body sensations up to 50% in 30 seconds⁴
- BLAST has been utilized for the past 30 years in EMDR therapy as a method of treatment to de-escalate PTSD arousal
- BLAST is hypothesized to reduce stress by de-potentiating fear-memory synapses within the brain leading to decreased sympathetic nervous system (SNS) arousal.²
- American's reported stress levels are at a historic high at 4.8 out of 10¹
- Americans are reporting increasing sleeplessness (45%), anxiety (36%), irritability/anger (34%), and fatigue (34%) due to high levels of stress¹
- Hypothesis:** It was hypothesized that both SUD and BS would significantly decrease following 30 seconds of BLAST

Methodology

- The non-clinical sample consisted of 9,821 adults aged 18-90 (male=3,233; female=6,381).
- Archival data of subjective stress, body sensations (BS) self-report ratings, and stress profile were collected from survey data via a mobile application
- Responses which did not include both a pre or post rating or demographic data were excluded
- Subjects were asked to think of a stressor and rate the intensity of their subjective distress and body sensation on a scale from 1-10 with 10 as most intense
- While continuing to think of a stressor, subjects held the pair of BLAST devices, which deliver quick, alternating rhythmic vibrations. After 30 seconds, subjects were prompted to re-rate SUD and BS

Results

- Ratings of SUD and BS significantly reduced by 55% and 43% respectively following BLAST
- "Overwhelmed" and "Scattered" were the most common stress profiles

Paired Sample One Tail t-Tests

| | |
|-----------------------------------|---------------|
| Subjective Unit of Distress (SUD) | $p = 0.000^*$ |
| Body Sensation (BS) | $p = 0.000^*$ |

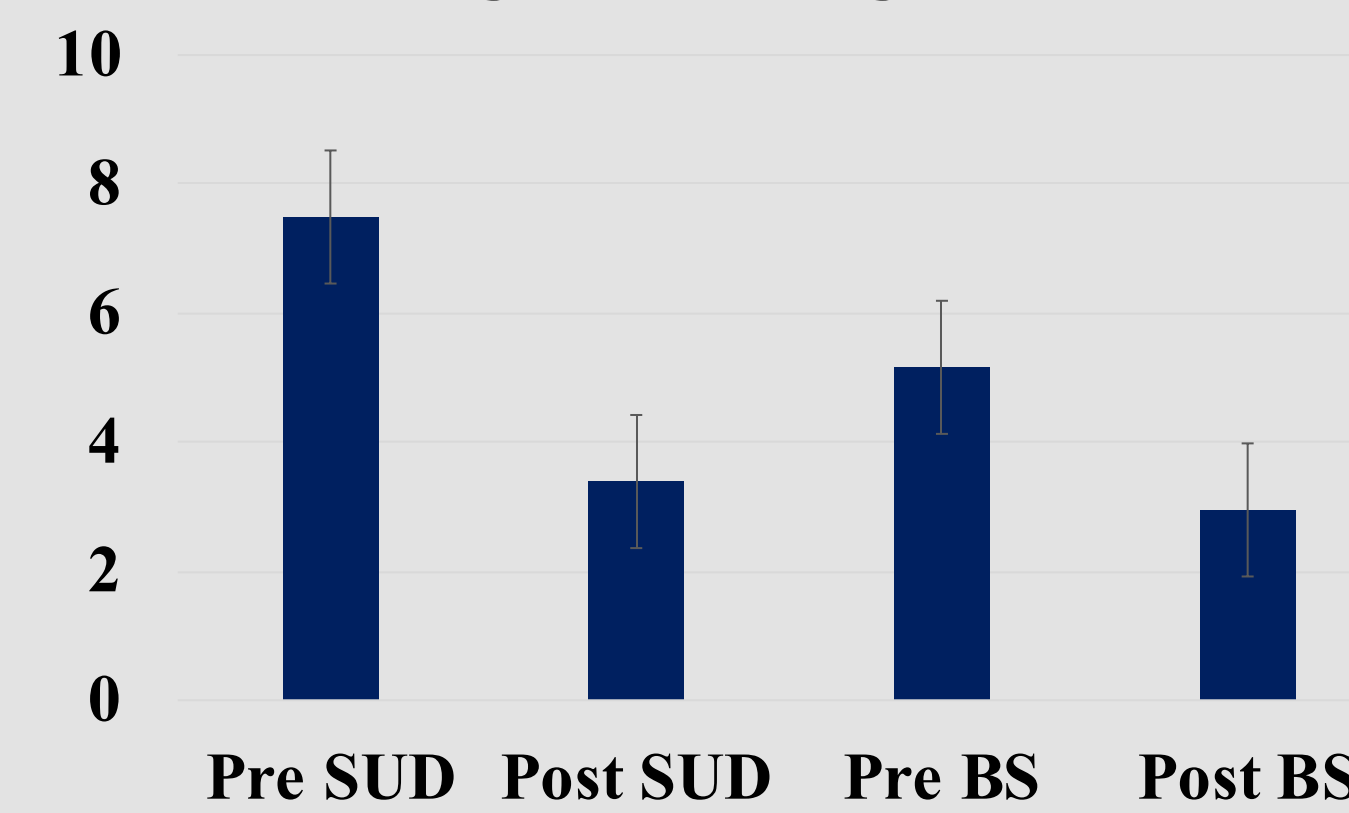
Note: *Significant at $p < 0.05$

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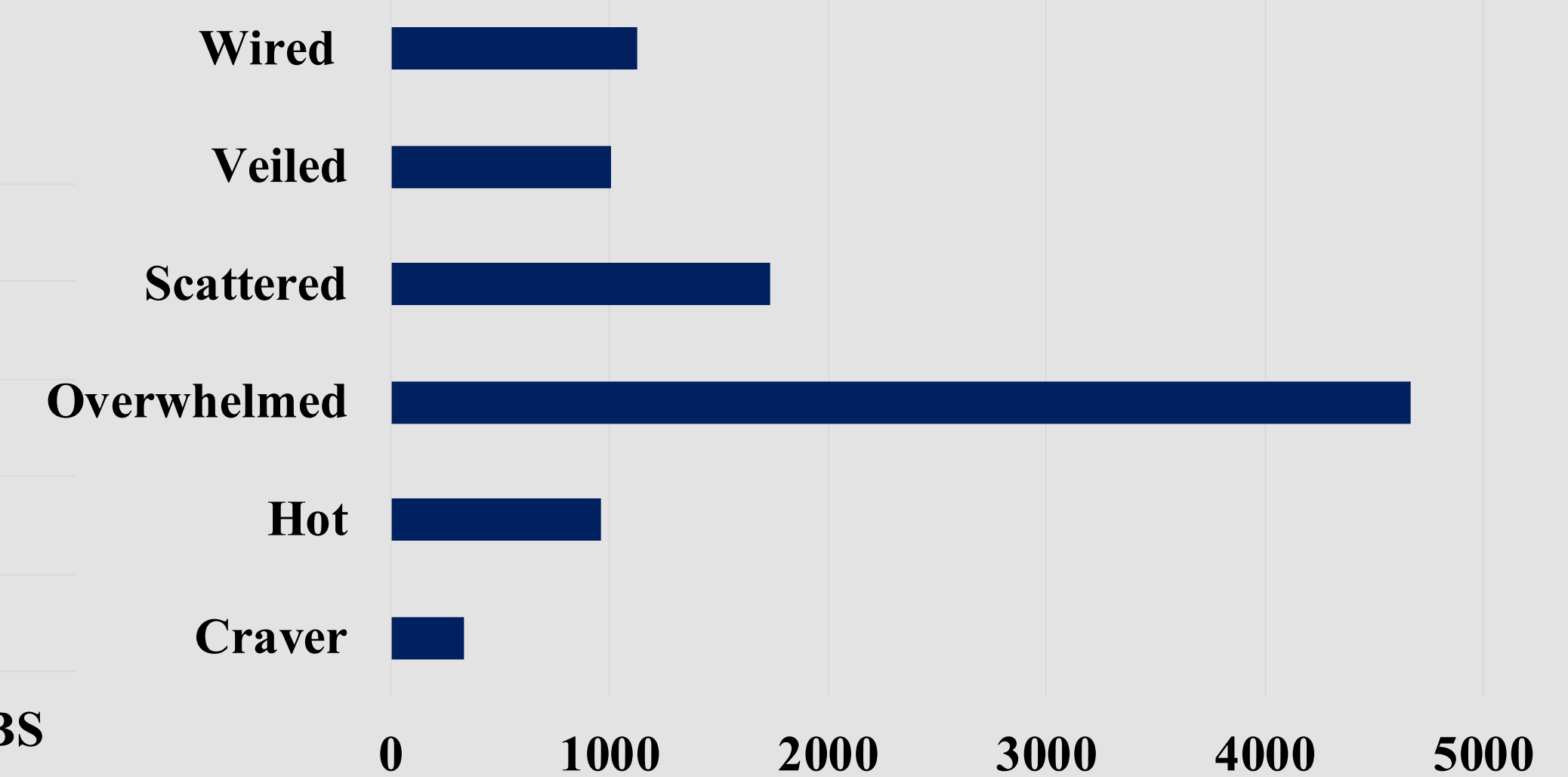
Results

Pre and Post SUD and BS Ratings Following BLAST



| | Pre SUD | Post SUD | Pre BS | Post BS |
|--------------------|---------|----------|--------|---------|
| Average | 7.49 | 3.39 | 5.16 | 2.95 |
| Standard Deviation | 1.88 | 2.80 | 3.01 | 2.76 |

Stress Profile Type



| | Total | % | Total | % | |
|-------------|-------|-----|-------------|------|-----|
| Male | | | Female | | |
| Craver | 100 | 3% | Craver | 226 | 4% |
| Hot | 348 | 11% | Hot | 584 | 9% |
| Overwhelmed | 1386 | 43% | Overwhelmed | 3187 | 50% |
| Scattered | 575 | 18% | Scattered | 110 | 17% |
| Veiled | 434 | 13% | Veiled | 541 | 8% |
| Wired | 390 | 12% | Wired | 733 | 11% |

Discussion/Limitations

- Nearly half of the sample (48%) indicated an "Overwhelmed" stress profile, which may be related to the most common U.S. stressors which include money, work, and health concerns¹
- The "Stress Profile Survey" was created preliminary to assess current symptoms of stress individuals were experiencing but was not analyzed for measurement efficacy/specificity
- Ratings were highly subjective and it is unknown whether there were confounding variables that may have contributed to decreases in SUD and BS ratings
- Follow-up longitudinal research utilizing a randomized control group and standardized measures of stress may be helpful in assessing whether BLAST may be an effective tool in mediating somatic and cognitive stress symptoms for non-clinical and clinical populations