

Supplemental Methods & Results

A: *HRV Recordings QA/QC*: The Biocom 3000 HRV Monitor is equipped with an internal impedance monitor and denotes when electrode/skin impedance is out of range. A variable color LED display denotes the word “good” when acceptable impedance range is noted. Impedances below 300 KOhm were considered good, which was verified for each participant when they were instrumented. Sampling rate was 1024 samples per second. With respect to the artifact detection and rejection, clean noise-free real-time signals were first documented by the technician with a very sharp R-peak. Software detected the near proximity of the R-peak and values that deviated by more than 30% of the normal previous normal heart rate reading were tagged and rejected. The software is also capable of detecting various types of abnormal heartbeats resulting from several causes. The following statistical steps, conducted by the device, were conducted to assess and reject artifacts: 1) Linear trends were removed from the HR data record, 2) mean HR and standard deviation of HR was calculate and 3) each HR reading was tested to determine if it belonged to the normal HR data pool based on the Student t-test. Abnormal or out of range HRs were visually tagged and removed from the analysis.

b. *The Zero Gravity Chair*: All sites used the same equipment and calibration procedures. The OPERA team developed a detailed MOP prior to initiating enrollment. Each unit was equipped with the same devices and technical staff were trained and observed prior to initiating the study. Each site used the “zero gravity chair (<http://sitincomfort.com/zerrec.html>), which is a unique recliner/chair that permitted enrollees to easily transition between supine, sitting, and standing positions.

c. *Number of chronic cases examined at each study site*: The number of cases recruited by recruitment site were - Baltimore:46, Buffalo:23, Chapel Hill:56, and Gainsville:60. Detailed demographic and clinical descriptions of these cases are provided by Slade et al and Ohrbach et al in the Compendium.

d. *Baseline cardiovascular measures during the protocol*: Participants were in a sitting position for at least 15 minutes prior to initiating the first STROOP procedure. A formal 10 min pre-Stroop rest period was imposed and approximately 5 minutes elapsed from the end of the QST procedures and the initiation of the per-STROOP rest period. Also, please see response to comment 6i (below).

i. *Changes in baseline values during the protocol*: To determine if meaningful differences in post-task baseline values existed, we used generalized estimating equation models to examine within-person temporal changes in the last four measurements for the supine rest period (12:30, 15:00, 17:30 and 20:00 min) and the last four measurements for the Stroop rest period (2:30, 5:00, 7:30, and 10:00 min). Among controls, average reductions in blood pressure during the 7:30 min period were statistically significant although physiologically meaningless: ie. <1.5mm Hg during the last 7:30 of the Stroop-rest period and <0.75mm Hg during the last 7:30 of the supine-rest period. Likewise, average increases in heart rate during the same period were statistically significant although physiologically meaningless: <1.5 beats per minute during the last 7:30 of the Stroop-rest period, and <0.5 beats per minute during the last 7:30 of the Supine-rest period. In TMD cases, the differences were smaller, and statistically non-significant.

Supplementary e-Tables

Supplementary e-Table 1: Resting Autonomic Measures by Age – Reclined (20 min)

| Autonomic Variables | Units | Age = 18-24 yrs | | | Age = 25-34 yrs | | | Age = 35-44 yrs | | | P-value ¹ |
|---------------------|-----------------|-----------------|--------|------|-----------------|--------|------|-----------------|--------|------|----------------------|
| | | n | mean | se | n | mean | se | n | mean | se | |
| Mean SBP | mmHg | 831 | 109.31 | 0.32 | 440 | 110.91 | 0.49 | 324 | 116.18 | 0.74 | <0.0001 |
| Mean DBP | mmHg | 831 | 62.97 | 0.24 | 440 | 65.60 | 0.37 | 324 | 69.83 | 0.49 | <0.0001 |
| Mean MAP | mmHg | 831 | 80.81 | 0.24 | 439 | 82.95 | 0.39 | 323 | 87.65 | 0.58 | <0.0001 |
| Mean HR | bpm | 827 | 61.99 | 0.34 | 440 | 62.91 | 0.49 | 324 | 64.86 | 0.62 | 0.0001 |
| HR/MAP Index | bpm/mmHg | 819 | 0.77 | 0.00 | 428 | 0.76 | 0.01 | 315 | 0.74 | 0.01 | 0.0188 |
| MeanHR (HRV) | bpm | 798 | 63.35 | 0.35 | 410 | 63.99 | 0.49 | 309 | 65.91 | 0.65 | 0.0008 |
| RMSSD | ms | 798 | 88.98 | 1.54 | 409 | 78.57 | 2.04 | 306 | 62.64 | 1.99 | <0.0001 |
| SDNN | ms | 797 | 88.50 | 2.77 | 408 | 73.50 | 3.59 | 299 | 56.11 | 3.52 | <0.0001 |
| LogTP | ms ² | 794 | 7.41 | 0.03 | 409 | 7.14 | 0.04 | 304 | 6.70 | 0.06 | <0.0001 |
| LogVLF | ms ² | 798 | 6.24 | 0.03 | 409 | 6.05 | 0.04 | 304 | 5.74 | 0.05 | <0.0001 |
| LogLF | ms ² | 797 | 6.10 | 0.03 | 406 | 5.83 | 0.04 | 300 | 5.40 | 0.06 | <0.0001 |
| LogHF | ms ² | 795 | 6.04 | 0.04 | 405 | 5.65 | 0.05 | 294 | 5.07 | 0.07 | <0.0001 |

1 - P-values are from analysis of variance

Supplementary e-Table 2: Orthostatic Challenge Autonomic Measures by Age (5 min)

| Autonomic Variables | Units | Age = 18-24 yrs | | | Age = 25-34 yrs | | | Age = 35-44 yrs | | | P-value ¹ |
|---------------------|-----------------|-----------------|-------|------|-----------------|-------|------|-----------------|-------|------|----------------------|
| | | n | mean | se | n | mean | se | n | mean | se | |
| ΔSBP | mmHg | 805 | 6.74 | 0.48 | 423 | 6.48 | 0.66 | 306 | 3.46 | 0.71 | 0.0010 |
| ΔDBP | mmHg | 800 | 8.89 | 0.31 | 417 | 8.09 | 0.45 | 304 | 6.11 | 0.48 | <0.0001 |
| ΔMAP | mmHg | 803 | 9.59 | 0.33 | 420 | 8.32 | 0.48 | 304 | 5.88 | 0.49 | <0.0001 |
| ΔHR | bpm | 802 | 24.95 | 0.52 | 423 | 19.98 | 0.66 | 306 | 14.93 | 0.60 | <0.0001 |
| MeanHR (HRV) | bpm | 795 | 83.34 | 0.41 | 405 | 81.31 | 0.58 | 301 | 78.86 | 0.77 | <0.0001 |
| SDNN | ms | 794 | 79.45 | 1.12 | 405 | 73.23 | 1.51 | 297 | 64.80 | 2.60 | <0.0001 |
| RMSSD | ms | 781 | 37.33 | 0.99 | 396 | 35.67 | 1.46 | 280 | 45.79 | 5.60 | 0.0165 |
| LogTP | ms ² | 792 | 7.24 | 0.03 | 403 | 7.02 | 0.04 | 296 | 6.56 | 0.06 | <0.0001 |
| LogVLF | ms ² | 793 | 6.42 | 0.03 | 404 | 6.24 | 0.04 | 295 | 5.86 | 0.06 | <0.0001 |
| LogLF | ms ² | 792 | 6.36 | 0.03 | 403 | 6.09 | 0.04 | 294 | 5.46 | 0.06 | <0.0001 |
| LogHF | ms ² | 778 | 4.66 | 0.03 | 394 | 4.39 | 0.05 | 261 | 4.23 | 0.07 | <0.0001 |

1 - P-values are from analysis of variance

Supplementary e-Table 3: Color-Word Stroop Autonomic Measures by Age (5 min)

| Autonomic Variables | Units | Age = 18-24 yrs | | | Age = 25-34 yrs | | | Age = 35-44 yrs | | | P-value ¹ |
|---------------------|-----------------|-----------------|--------|------|-----------------|--------|------|-----------------|--------|------|----------------------|
| | | n | mean | se | n | mean | se | n | mean | se | |
| Mean Δ SBP | mmHg | 829 | 1.93 | 0.21 | 442 | 3.07 | 0.27 | 322 | 2.26 | 0.37 | 0.0058 |
| Mean Δ DBP | mmHg | 828 | 0.67 | 0.19 | 442 | 1.45 | 0.24 | 322 | 0.47 | 0.28 | 0.0153 |
| Mean Δ MAP | mmHg | 829 | 1.29 | 0.18 | 441 | 2.19 | 0.22 | 322 | 1.56 | 0.27 | 0.0092 |
| Mean Δ HR | bpm | 829 | 2.32 | 0.16 | 442 | 3.12 | 0.25 | 322 | 3.17 | 0.26 | 0.0035 |
| Mean SBP | mmHg | 829 | 114.15 | 0.37 | 443 | 116.33 | 0.49 | 322 | 120.68 | 0.80 | <0.0001 |
| Mean DBP | mmHg | 828 | 69.62 | 0.26 | 443 | 72.61 | 0.36 | 322 | 75.43 | 0.53 | <0.0001 |
| Mean MAP | mmHg | 829 | 86.79 | 0.29 | 442 | 89.44 | 0.40 | 322 | 93.38 | 0.64 | <0.0001 |
| Mean HR | bpm | 829 | 71.94 | 0.33 | 443 | 72.58 | 0.48 | 322 | 71.60 | 0.61 | 0.3767 |
| HR/MAP Index | bpm/mmHg | 829 | 0.83 | 0.00 | 442 | 0.82 | 0.01 | 322 | 0.78 | 0.01 | <0.0001 |
| MeanHR (HRV) | bpm | 794 | 71.96 | 0.36 | 408 | 72.41 | 0.51 | 308 | 71.95 | 0.64 | 0.7606 |
| SDNN | ms | 795 | 65.97 | 1.27 | 408 | 55.68 | 1.42 | 307 | 49.39 | 2.27 | <0.0001 |
| RMSSD | ms | 793 | 58.42 | 1.55 | 406 | 49.06 | 1.84 | 290 | 46.42 | 3.12 | <0.0001 |
| LogTP | ms ² | 792 | 6.84 | 0.03 | 408 | 6.53 | 0.04 | 307 | 6.06 | 0.06 | <0.0001 |
| LogVLF | ms ² | 794 | 5.68 | 0.03 | 407 | 5.38 | 0.04 | 306 | 5.01 | 0.06 | <0.0001 |
| LogLF | ms ² | 794 | 5.75 | 0.03 | 408 | 5.46 | 0.05 | 302 | 4.97 | 0.06 | <0.0001 |
| LogHF | ms ² | 789 | 5.48 | 0.04 | 404 | 5.10 | 0.05 | 287 | 4.65 | 0.07 | <0.0001 |

1 - P-values are from analysis of variance

Supplementary e-Table 4: Pain-Affect Stroop Autonomic Measures by Age (5 min)

| Autonomic Variables | Units | Age = 18-24 yrs | | | Age = 25-34 yrs | | | Age = 35-44 yrs | | | P-value ¹ |
|---------------------|-----------------|-----------------|--------|------|-----------------|--------|------|-----------------|--------|------|----------------------|
| | | n | mean | se | n | mean | se | n | mean | se | |
| Mean Δ SBP | mmHg | 828 | 0.25 | 0.20 | 441 | 0.65 | 0.27 | 323 | 0.01 | 0.34 | 0.2966 |
| Mean Δ DBP | mmHg | 827 | -1.38 | 0.20 | 441 | -0.94 | 0.27 | 323 | -1.59 | 0.29 | 0.2419 |
| Mean Δ MAP | mmHg | 828 | -0.73 | 0.17 | 440 | -0.37 | 0.23 | 323 | -0.72 | 0.27 | 0.4180 |
| Mean Δ HR | bpm | 828 | 3.05 | 0.16 | 441 | 2.97 | 0.21 | 323 | 3.05 | 0.22 | 0.9456 |
| Mean SBP | mmHg | 828 | 112.51 | 0.35 | 443 | 113.93 | 0.48 | 325 | 118.39 | 0.75 | <0.0001 |
| Mean DBP | mmHg | 827 | 67.59 | 0.26 | 443 | 70.24 | 0.38 | 325 | 73.30 | 0.51 | <0.0001 |
| Mean MAP | mmHg | 828 | 84.79 | 0.28 | 442 | 86.92 | 0.39 | 325 | 91.03 | 0.61 | <0.0001 |
| Mean HR | bpm | 828 | 72.71 | 0.34 | 443 | 72.45 | 0.48 | 325 | 71.55 | 0.61 | 0.2083 |
| HR/MAP Index | bpm/mmHg | 828 | 0.86 | 0.00 | 442 | 0.84 | 0.01 | 325 | 0.80 | 0.01 | <0.0001 |
| MeanHR (HRV) | bpm | 790 | 72.49 | 0.36 | 411 | 72.56 | 0.51 | 310 | 71.97 | 0.63 | 0.7064 |
| SDNN | ms | 790 | 66.82 | 1.25 | 411 | 57.71 | 1.37 | 309 | 50.81 | 2.36 | <0.0001 |
| RMSSD | ms | 787 | 57.21 | 1.77 | 409 | 46.34 | 1.64 | 292 | 50.17 | 4.32 | 0.0016 |
| LogTP | ms ² | 789 | 6.94 | 0.03 | 412 | 6.60 | 0.04 | 308 | 6.13 | 0.06 | <0.0001 |
| LogVLF | ms ² | 788 | 5.86 | 0.03 | 412 | 5.56 | 0.04 | 304 | 5.18 | 0.06 | <0.0001 |
| LogLF | ms ² | 789 | 5.86 | 0.03 | 412 | 5.53 | 0.05 | 304 | 4.98 | 0.07 | <0.0001 |
| LogHF | ms ² | 785 | 5.41 | 0.04 | 406 | 5.01 | 0.05 | 290 | 4.67 | 0.07 | <0.0001 |

1 - P-values are from analysis of variance

Supplementary e-Table 5: Resting Autonomic Measures by Gender – Reclined (20 min)

| Autonomic Variables | Units | Female | | | Male | | | P-value ¹ |
|---------------------|-----------------|--------|--------|------|------|--------|------|----------------------|
| | | n | mean | se | n | mean | se | |
| Mean SBP | mmHg | 907 | 109.16 | 0.36 | 688 | 113.78 | 0.39 | <0.0001 |
| Mean DBP | mmHg | 907 | 65.78 | 0.26 | 688 | 64.19 | 0.32 | <0.0001 |
| Mean MAP | mmHg | 905 | 82.28 | 0.29 | 688 | 83.45 | 0.32 | 0.0068 |
| Mean HR | bpm | 905 | 63.81 | 0.33 | 686 | 61.54 | 0.40 | <0.0001 |
| HR/MAP Index | bpm/mmHg | 884 | 0.78 | 0.00 | 678 | 0.74 | 0.00 | <0.0001 |
| MeanHR (HRV) | bpm | 868 | 64.98 | 0.34 | 649 | 62.80 | 0.41 | <0.0001 |
| SDNN | ms | 865 | 78.66 | 1.44 | 648 | 83.75 | 1.66 | 0.0209 |
| RMSSD | ms | 861 | 79.82 | 2.54 | 643 | 75.55 | 2.95 | 0.2727 |
| LogTP | ms ² | 862 | 7.11 | 0.03 | 645 | 7.30 | 0.03 | <0.0001 |
| LogVLF | ms ² | 865 | 5.95 | 0.03 | 646 | 6.28 | 0.03 | <0.0001 |
| LogLF | ms ² | 859 | 5.74 | 0.03 | 644 | 6.09 | 0.04 | <0.0001 |
| LogHF | ms ² | 855 | 5.81 | 0.04 | 639 | 5.66 | 0.04 | 0.0096 |

1 - P-values are from analysis of variance

Supplementary e-Table 6: Orthostatic Challenge Autonomic Measures by Gender (5 min)

| Autonomic Variables | Units | Female | | | Male | | | P-value ¹ |
|---------------------|-----------------|--------|-------|------|------|-------|------|----------------------|
| | | n | mean | se | n | mean | se | |
| ΔSBP | mmHg | 881 | 5.08 | 0.41 | 653 | 7.27 | 0.58 | 0.0016 |
| ΔDBP | mmHg | 873 | 6.74 | 0.26 | 648 | 9.97 | 0.39 | <0.0001 |
| ΔMAP | mmHg | 876 | 7.20 | 0.28 | 651 | 10.26 | 0.40 | <0.0001 |
| ΔHR | bpm | 880 | 19.54 | 0.47 | 651 | 24.32 | 0.55 | <0.0001 |
| MeanHR (HRV) | bpm | 855 | 81.22 | 0.40 | 646 | 82.78 | 0.49 | 0.0132 |
| SDNN | ms | 854 | 73.35 | 1.20 | 642 | 76.87 | 1.35 | 0.0525 |
| RMSSD | ms | 834 | 38.78 | 1.50 | 623 | 38.14 | 2.17 | 0.8033 |
| LogTP | ms ² | 851 | 6.95 | 0.03 | 640 | 7.16 | 0.03 | <0.0001 |
| LogVLF | ms ² | 850 | 6.19 | 0.03 | 642 | 6.35 | 0.04 | 0.0006 |
| LogLF | ms ² | 850 | 5.95 | 0.03 | 639 | 6.32 | 0.04 | <0.0001 |
| LogHF | ms ² | 819 | 4.61 | 0.03 | 614 | 4.38 | 0.04 | <0.0001 |

1 - P-values are from analysis of variance

Supplementary e-Table 7: Color-Word Stroop Autonomic Measures by Gender (5 min)

| Autonomic Variables | Units | Female | | | Male | | | P-value ¹ |
|---------------------|-----------------|--------|--------|------|------|--------|------|----------------------|
| | | n | mean | se | n | mean | se | |
| Mean Δ SBP | mmHg | 900 | 2.26 | 0.20 | 693 | 2.39 | 0.23 | 0.6782 |
| Mean Δ DBP | mmHg | 899 | 0.53 | 0.17 | 693 | 1.26 | 0.20 | 0.0059 |
| Mean Δ MAP | mmHg | 899 | 1.42 | 0.16 | 693 | 1.82 | 0.19 | 0.1116 |
| Mean Δ HR | bpm | 900 | 2.96 | 0.16 | 693 | 2.40 | 0.19 | 0.0237 |
| Mean SBP | mmHg | 901 | 112.61 | 0.38 | 693 | 120.58 | 0.40 | <0.0001 |
| Mean DBP | mmHg | 900 | 70.60 | 0.27 | 693 | 72.96 | 0.31 | <0.0001 |
| Mean MAP | mmHg | 900 | 87.01 | 0.31 | 693 | 91.26 | 0.33 | <0.0001 |
| Mean HR | bpm | 901 | 73.32 | 0.33 | 693 | 70.40 | 0.38 | <0.0001 |
| HR/MAP Index | bpm/mmHg | 900 | 0.85 | 0.00 | 693 | 0.78 | 0.00 | <0.0001 |
| MeanHR (HRV) | bpm | 859 | 73.44 | 0.35 | 651 | 70.28 | 0.40 | <0.0001 |
| SDNN | ms | 860 | 58.14 | 1.20 | 650 | 62.03 | 1.41 | 0.0349 |
| RMSSD | ms | 847 | 53.82 | 1.53 | 642 | 53.14 | 1.74 | 0.7707 |
| LogTP | ms ² | 857 | 6.51 | 0.03 | 650 | 6.71 | 0.03 | <0.0001 |
| LogVLF | ms ² | 858 | 5.36 | 0.03 | 649 | 5.60 | 0.04 | <0.0001 |
| LogLF | ms ² | 856 | 5.36 | 0.03 | 648 | 5.71 | 0.04 | <0.0001 |
| LogHF | ms ² | 842 | 5.24 | 0.04 | 638 | 5.18 | 0.04 | 0.2592 |

1 - P-values are from analysis of variance

Supplementary e-Table 8: Pain-Affect Stroop Autonomic Measures by Gender (5 min)

| Autonomic Variables | Units | Female | | | Male | | | P-value ¹ |
|---------------------|-----------------|--------|--------|------|------|--------|------|----------------------|
| | | n | mean | se | n | mean | se | |
| Mean Δ SBP | mmHg | 899 | 0.16 | 0.19 | 693 | 0.51 | 0.23 | 0.2261 |
| Mean Δ DBP | mmHg | 899 | -1.39 | 0.19 | 692 | -1.18 | 0.21 | 0.4561 |
| Mean Δ MAP | mmHg | 898 | -0.75 | 0.16 | 693 | -0.47 | 0.19 | 0.2554 |
| Mean Δ HR | bpm | 899 | 3.13 | 0.14 | 693 | 2.89 | 0.17 | 0.2791 |
| Mean SBP | mmHg | 902 | 110.57 | 0.36 | 694 | 118.69 | 0.38 | <0.0001 |
| Mean DBP | mmHg | 902 | 68.71 | 0.27 | 693 | 70.51 | 0.32 | <0.0001 |
| Mean MAP | mmHg | 901 | 84.89 | 0.30 | 694 | 88.94 | 0.33 | <0.0001 |
| Mean HR | bpm | 902 | 73.58 | 0.33 | 694 | 70.87 | 0.38 | <0.0001 |
| HR/MAP Index | bpm/mmHg | 901 | 0.87 | 0.00 | 694 | 0.80 | 0.00 | <0.0001 |
| MeanHR (HRV) | bpm | 857 | 73.66 | 0.36 | 654 | 70.76 | 0.40 | <0.0001 |
| SDNN | ms | 857 | 58.51 | 1.15 | 653 | 64.42 | 1.45 | 0.0012 |
| RMSSD | ms | 845 | 51.89 | 1.54 | 643 | 54.09 | 2.36 | 0.4183 |
| LogTP | ms ² | 858 | 6.59 | 0.03 | 651 | 6.80 | 0.03 | <0.0001 |
| LogVLF | ms ² | 856 | 5.54 | 0.03 | 648 | 5.77 | 0.04 | <0.0001 |
| LogLF | ms ² | 854 | 5.43 | 0.03 | 651 | 5.81 | 0.04 | <0.0001 |
| LogHF | ms ² | 842 | 5.18 | 0.04 | 639 | 5.12 | 0.04 | 0.2856 |

1 - P-values are from analysis of variance

Supplementary e-Table 9: Resting Autonomic Measures by Race/Ethnicity – Reclined (20 min)

| Autonomic Variables | Units | White | | | Other | | | P-value ¹ |
|---------------------|-----------------|-------|--------|------|-------|--------|------|----------------------|
| | | n | mean | se | n | mean | se | |
| Mean SBP | mmHg | 834 | 109.16 | 0.32 | 761 | 113.33 | 0.42 | <0.0001 |
| Mean DBP | mmHg | 834 | 63.53 | 0.25 | 761 | 66.80 | 0.31 | <0.0001 |
| Mean MAP | mmHg | 834 | 81.08 | 0.25 | 759 | 84.66 | 0.34 | <0.0001 |
| Mean HR | bpm | 831 | 61.63 | 0.35 | 760 | 64.15 | 0.37 | <0.0001 |
| HR/MAP Index | bpm/mmHg | 822 | 0.76 | 0.00 | 740 | 0.76 | 0.00 | 0.6898 |
| MeanHR (HRV) | bpm | 807 | 62.99 | 0.35 | 710 | 65.26 | 0.38 | <0.0001 |
| SDNN | ms | 807 | 85.28 | 1.61 | 706 | 75.76 | 1.42 | <0.0001 |
| RMSSD | ms | 805 | 81.84 | 2.91 | 699 | 73.57 | 2.41 | 0.0317 |
| LogTP | ms ² | 802 | 7.29 | 0.03 | 705 | 7.09 | 0.03 | <0.0001 |
| LogVLF | ms ² | 807 | 6.19 | 0.03 | 704 | 5.97 | 0.03 | <0.0001 |
| LogLF | ms ² | 804 | 5.99 | 0.03 | 699 | 5.77 | 0.04 | <0.0001 |
| LogHF | ms ² | 801 | 5.81 | 0.04 | 693 | 5.66 | 0.04 | 0.0104 |

1 - P-values are from analysis of variance

Supplementary e-Table 10: Orthostatic Challenge Autonomic Measures by Race/Ethnicity (5 min)

| Autonomic Variables | Units | White | | | Other | | | P-value ¹ |
|---------------------|-----------------|-------|-------|------|-------|-------|------|----------------------|
| | | n | mean | se | n | mean | se | |
| ΔSBP | mmHg | 810 | 6.60 | 0.49 | 724 | 5.36 | 0.48 | 0.0730 |
| ΔDBP | mmHg | 802 | 8.33 | 0.31 | 719 | 7.87 | 0.33 | 0.3102 |
| ΔMAP | mmHg | 806 | 8.87 | 0.33 | 721 | 8.09 | 0.35 | 0.1060 |
| ΔHR | bpm | 808 | 23.24 | 0.51 | 723 | 19.71 | 0.50 | <0.0001 |
| MeanHR (HRV) | bpm | 798 | 81.51 | 0.43 | 703 | 82.33 | 0.46 | 0.1875 |
| SDNN | ms | 796 | 77.37 | 1.07 | 700 | 72.01 | 1.48 | 0.0029 |
| RMSSD | ms | 782 | 36.15 | 1.27 | 675 | 41.23 | 2.30 | 0.0453 |
| LogTP | ms ² | 794 | 7.16 | 0.03 | 697 | 6.91 | 0.03 | <0.0001 |
| LogVLF | ms ² | 795 | 6.37 | 0.03 | 697 | 6.14 | 0.04 | <0.0001 |
| LogLF | ms ² | 795 | 6.28 | 0.03 | 694 | 5.92 | 0.04 | <0.0001 |
| LogHF | ms ² | 771 | 4.48 | 0.03 | 662 | 4.54 | 0.04 | 0.2426 |

1 - P-values are from analysis of variance

Supplementary e-Table 11: Color-Word Stroop Autonomic Measures by Race/Ethnicity (5 min)

| Autonomic Variables | Units | White | | | Other | | | P-value ¹ |
|---------------------|-----------------|-------|--------|------|-------|--------|------|----------------------|
| | | n | mean | se | n | mean | se | |
| Mean ΔSBP | mmHg | 826 | 2.57 | 0.21 | 767 | 2.04 | 0.22 | 0.0787 |
| Mean ΔDBP | mmHg | 825 | 1.02 | 0.18 | 767 | 0.65 | 0.20 | 0.1650 |
| Mean ΔMAP | mmHg | 826 | 1.71 | 0.17 | 766 | 1.46 | 0.18 | 0.3191 |
| Mean ΔHR | bpm | 826 | 2.52 | 0.17 | 767 | 2.92 | 0.17 | 0.1038 |
| Mean SBP | mmHg | 827 | 114.76 | 0.39 | 767 | 117.49 | 0.43 | <0.0001 |
| Mean DBP | mmHg | 826 | 70.73 | 0.28 | 767 | 72.59 | 0.30 | <0.0001 |
| Mean MAP | mmHg | 827 | 87.73 | 0.31 | 766 | 90.08 | 0.35 | <0.0001 |
| Mean HR | bpm | 827 | 71.46 | 0.35 | 767 | 72.68 | 0.36 | 0.0146 |
| HR/MAP Index | bpm/mmHg | 827 | 0.82 | 0.00 | 766 | 0.82 | 0.00 | 0.3700 |
| MeanHR (HRV) | bpm | 796 | 71.26 | 0.36 | 714 | 73.00 | 0.39 | 0.0011 |
| SDNN | ms | 796 | 60.27 | 1.17 | 714 | 59.31 | 1.42 | 0.5973 |
| RMSSD | ms | 787 | 51.84 | 1.47 | 702 | 55.42 | 1.80 | 0.1193 |
| LogTP | ms ² | 793 | 6.67 | 0.03 | 714 | 6.51 | 0.04 | 0.0003 |
| LogVLF | ms ² | 795 | 5.56 | 0.03 | 712 | 5.35 | 0.04 | <0.0001 |
| LogLF | ms ² | 794 | 5.64 | 0.03 | 710 | 5.38 | 0.04 | <0.0001 |
| LogHF | ms ² | 783 | 5.22 | 0.04 | 697 | 5.21 | 0.04 | 0.7858 |

1 - P-values are from analysis of variance

Supplementary e-Table 12: Pain-Affect Stroop Autonomic Measures by Race/Ethnicity (5 min)

| Autonomic Variables | Units | White | | | Other | | | P-value ¹ |
|---------------------|-----------------|-------|--------|------|-------|--------|------|----------------------|
| | | n | mean | se | n | mean | se | |
| Mean Δ SBP | mmHg | 824 | 0.89 | 0.20 | 768 | -0.30 | 0.21 | <0.0001 |
| Mean Δ DBP | mmHg | 824 | -0.93 | 0.19 | 767 | -1.69 | 0.21 | 0.0066 |
| Mean Δ MAP | mmHg | 824 | -0.20 | 0.17 | 767 | -1.08 | 0.18 | 0.0003 |
| Mean Δ HR | bpm | 824 | 2.95 | 0.15 | 768 | 3.10 | 0.16 | 0.5056 |
| Mean SBP | mmHg | 825 | 113.07 | 0.38 | 771 | 115.21 | 0.41 | 0.0001 |
| Mean DBP | mmHg | 825 | 68.76 | 0.28 | 770 | 70.27 | 0.31 | 0.0002 |
| Mean MAP | mmHg | 825 | 85.81 | 0.30 | 770 | 87.55 | 0.34 | 0.0001 |
| Mean HR | bpm | 825 | 71.89 | 0.35 | 771 | 72.95 | 0.36 | 0.0353 |
| HR/MAP Index | bpm/mmHg | 825 | 0.84 | 0.00 | 770 | 0.84 | 0.01 | 0.7174 |
| MeanHR (HRV) | bpm | 799 | 71.80 | 0.36 | 712 | 73.08 | 0.39 | 0.0174 |
| SDNN | ms | 798 | 61.91 | 1.12 | 712 | 60.12 | 1.46 | 0.3258 |
| RMSSD | ms | 789 | 51.04 | 1.73 | 699 | 54.87 | 2.09 | 0.1550 |
| LogTP | ms ² | 798 | 6.77 | 0.03 | 711 | 6.58 | 0.04 | <0.0001 |
| LogVLF | ms ² | 797 | 5.75 | 0.03 | 707 | 5.52 | 0.04 | <0.0001 |
| LogLF | ms ² | 798 | 5.73 | 0.03 | 707 | 5.44 | 0.04 | <0.0001 |
| LogHF | ms ² | 785 | 5.14 | 0.04 | 696 | 5.17 | 0.04 | 0.6522 |

1 - P-values are from analysis of variance

Appendix Supplementary e-Table 13: Baseline Resting Autonomic Measures – Reclined (20 min). Distribution of autonomic measures assessed as continuous variables in TMD cases and controls

| Autonomic Variables | Units | Group | n | mean | sd | min | Percentiles | | | | | max |
|---------------------|-----------------|----------|------|-------|------|------|-------------|-------|-------|-------|-------|-------|
| | | | | | | | 5th | 25th | 50th | 75th | 95th | |
| Mean SBP | mmHg | control | 1580 | 111.2 | 10.7 | 82.0 | 95.8 | 103.3 | 110.0 | 117.0 | 130.3 | 163.3 |
| Mean SBP | mmHg | TMD case | 182 | 110.5 | 10.2 | 87.0 | 95.7 | 103.7 | 110.0 | 116.3 | 125.0 | 149.3 |
| Mean DBP | mmHg | control | 1576 | 65.1 | 8.0 | 43.0 | 53.3 | 59.3 | 64.7 | 70.0 | 79.0 | 96.3 |
| Mean DBP | mmHg | TMD case | 181 | 66.8 | 7.6 | 46.0 | 55.7 | 62.0 | 66.7 | 71.3 | 80.0 | 88.3 |
| Mean MAP | mmHg | control | 1578 | 82.8 | 8.5 | 58.3 | 70.7 | 77.0 | 81.7 | 87.7 | 98.7 | 124.3 |
| Mean MAP | mmHg | TMD case | 182 | 83.3 | 8.1 | 63.7 | 70.0 | 77.7 | 83.0 | 87.7 | 97.7 | 107.0 |
| Mean HR | bpm | control | 1572 | 62.9 | 10.2 | 40.7 | 47.7 | 55.5 | 62.0 | 69.3 | 81.0 | 105.3 |
| Mean HR | bpm | TMD case | 182 | 64.9 | 10.7 | 43.7 | 50.0 | 57.3 | 63.3 | 73.0 | 82.3 | 97.3 |
| HR/MAP Index | bpm/mmHg | control | 1544 | 0.8 | 0.1 | 0.4 | 0.6 | 0.7 | 0.8 | 0.8 | 1.0 | 1.2 |
| HR/MAP Index | bpm/mmHg | TMD case | 178 | 0.8 | 0.1 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | 1.0 | 1.2 |
| MeanHR (HRV) | bpm | control | 1517 | 64.0 | 10.2 | 40.4 | 48.7 | 56.6 | 63.3 | 70.1 | 82.1 | 107.0 |
| MeanHR (HRV) | bpm | TMD case | 170 | 66.6 | 10.8 | 42.4 | 51.1 | 58.5 | 65.7 | 74.5 | 84.0 | 104.2 |
| SDNN | ms | control | 1513 | 80.8 | 42.4 | 13.9 | 34.6 | 54.1 | 73.7 | 98.1 | 144.8 | 443.5 |
| SDNN | ms | TMD case | 170 | 73.1 | 40.4 | 10.5 | 26.4 | 47.5 | 65.1 | 92.9 | 130.4 | 385.7 |
| RMSSD | ms | control | 1504 | 78.0 | 74.5 | 11.0 | 22.4 | 41.7 | 61.9 | 92.5 | 167.2 | 872.8 |
| RMSSD | ms | TMD case | 168 | 65.6 | 65.8 | 10.6 | 18.1 | 33.0 | 49.5 | 82.8 | 154.6 | 718.3 |
| LogTP | ms ² | control | 1507 | 7.2 | 0.9 | 3.5 | 5.8 | 6.6 | 7.2 | 7.8 | 8.5 | 9.2 |
| LogTP | ms ² | TMD case | 169 | 7.0 | 1.0 | 3.7 | 5.0 | 6.4 | 7.1 | 7.7 | 8.4 | 8.9 |
| LogVLF | ms ² | control | 1511 | 6.1 | 0.9 | 2.7 | 4.6 | 5.5 | 6.1 | 6.7 | 7.5 | 8.4 |
| LogVLF | ms ² | TMD case | 170 | 5.9 | 1.0 | 2.7 | 3.9 | 5.3 | 6.0 | 6.6 | 7.3 | 7.9 |
| LogLF | ms ² | control | 1503 | 5.9 | 1.0 | 2.3 | 4.3 | 5.3 | 5.9 | 6.6 | 7.4 | 8.6 |
| LogLF | ms ² | TMD case | 169 | 5.7 | 1.0 | 3.0 | 3.8 | 5.1 | 5.6 | 6.4 | 7.3 | 8.0 |
| LogHF | ms ² | control | 1494 | 5.7 | 1.1 | 2.3 | 3.7 | 5.0 | 5.8 | 6.5 | 7.6 | 8.6 |
| LogHF | ms ² | TMD case | 166 | 5.4 | 1.2 | 2.4 | 3.2 | 4.7 | 5.4 | 6.4 | 7.3 | 8.2 |

Appendix Supplementary e-Table 14: Orthostatic Challenge Autonomic Measures (5 min). Distribution of autonomic measures assessed as continuous variables in TMD cases and controls.

| Autonomic Variables | Units | Group | n | mean | sd | min | Percentiles | | | | | max |
|---------------------|-----------------|----------|------|------|------|-------|-------------|------|------|------|-------|-------|
| | | | | | | | 5th | 25th | 50th | 75th | 95th | |
| ΔSBP | mmHg | control | 1522 | 5.9 | 13.5 | -61.3 | -17.0 | -2.0 | 6.0 | 15.0 | 27.7 | 51.7 |
| ΔSBP | mmHg | TMD case | 178 | 4.7 | 13.5 | -38.0 | -16.7 | -3.7 | 4.8 | 13.0 | 26.7 | 38.3 |
| ΔDBP | mmHg | control | 1505 | 8.1 | 8.9 | -35.7 | -6.3 | 2.7 | 8.0 | 13.3 | 22.7 | 45.7 |
| ΔDBP | mmHg | TMD case | 176 | 6.4 | 8.0 | -17.3 | -5.0 | 1.0 | 5.7 | 11.3 | 19.3 | 42.7 |
| ΔMAP | mmHg | control | 1515 | 8.5 | 9.3 | -40.0 | -5.7 | 3.0 | 8.3 | 14.0 | 23.3 | 59.7 |
| ΔMAP | mmHg | TMD case | 178 | 7.6 | 9.5 | -28.7 | -7.0 | 2.3 | 8.0 | 13.0 | 22.7 | 46.0 |
| ΔHR | bpm | control | 1515 | 21.6 | 14.2 | -14.7 | 0.7 | 11.0 | 20.3 | 31.3 | 47.3 | 75.3 |
| ΔHR | bpm | TMD case | 178 | 21.1 | 13.3 | -8.3 | 0.7 | 11.0 | 19.7 | 30.7 | 46.0 | 53.7 |
| MeanHR (HRV) | bpm | control | 1501 | 81.9 | 12.1 | 45.1 | 62.6 | 73.7 | 81.7 | 89.2 | 102.6 | 131.0 |
| MeanHR (HRV) | bpm | TMD case | 170 | 84.7 | 13.3 | 54.1 | 65.2 | 75.8 | 83.2 | 92.5 | 108.7 | 134.3 |
| SDNN | ms | control | 1496 | 74.9 | 34.8 | 10.2 | 35.1 | 53.9 | 69.5 | 88.6 | 126.3 | 460.2 |
| SDNN | ms | TMD case | 170 | 68.1 | 25.2 | 20.2 | 28.1 | 51.8 | 66.0 | 83.6 | 116.6 | 141.5 |
| RMSSD | ms | control | 1457 | 38.5 | 48.3 | 10.2 | 14.3 | 22.6 | 30.1 | 42.0 | 73.1 | 908.9 |
| RMSSD | ms | TMD case | 161 | 30.9 | 17.0 | 10.7 | 13.7 | 20.2 | 27.9 | 34.4 | 58.6 | 142.9 |
| LogTP | ms ² | control | 1491 | 7.0 | 0.8 | 2.8 | 5.6 | 6.6 | 7.1 | 7.6 | 8.4 | 9.2 |
| LogTP | ms ² | TMD case | 170 | 6.8 | 0.9 | 3.5 | 5.2 | 6.3 | 6.9 | 7.4 | 8.3 | 8.7 |
| LogVLF | ms ² | control | 1492 | 6.3 | 0.9 | 2.5 | 4.7 | 5.7 | 6.3 | 6.9 | 7.7 | 8.7 |
| LogVLF | ms ² | TMD case | 170 | 6.1 | 1.0 | 3.1 | 4.4 | 5.5 | 6.1 | 6.8 | 7.8 | 8.3 |
| LogLF | ms ² | control | 1489 | 6.1 | 0.9 | 2.3 | 4.4 | 5.6 | 6.2 | 6.7 | 7.5 | 8.7 |
| LogLF | ms ² | TMD case | 166 | 5.9 | 0.9 | 2.9 | 4.5 | 5.4 | 5.9 | 6.5 | 7.4 | 7.9 |
| LogHF | ms ² | control | 1433 | 4.5 | 1.0 | 2.3 | 2.9 | 3.8 | 4.5 | 5.2 | 6.2 | 8.4 |
| LogHF | ms ² | TMD case | 159 | 4.3 | 0.9 | 2.3 | 2.8 | 3.6 | 4.2 | 5.0 | 5.9 | 6.8 |

Appendix Supplementary e-Table 15: Color-Word Stroop Autonomic Measures (5 min). Distribution of autonomic measures assessed as continuous variables in TMD cases and controls.

| Autonomic Variables | Units | Group | n | mean | sd | min | Percentiles | | | | | max |
|---------------------|-----------------|----------|------|------|------|-------|-------------|------|------|------|-------|-------|
| | | | | | | | 5th | 25th | 50th | 75th | 95th | |
| Mean ΔSBP | mmHg | control | 1347 | 2.4 | 5.8 | -15.9 | -7.1 | -1.5 | 2.2 | 6.0 | 12.0 | 32.9 |
| Mean ΔSBP | mmHg | TMD case | 153 | 2.9 | 5.5 | -8.9 | -4.9 | -1.5 | 2.2 | 6.7 | 13.0 | 19.7 |
| Mean ΔDBP | mmHg | control | 1336 | 0.8 | 5.2 | -21.5 | -7.5 | -2.3 | 0.9 | 3.8 | 9.2 | 24.7 |
| Mean ΔDBP | mmHg | TMD case | 152 | 2.1 | 4.6 | -8.2 | -6.1 | -1.0 | 1.9 | 5.0 | 10.4 | 14.9 |
| Mean ΔMAP | mmHg | control | 1339 | 1.6 | 4.9 | -12.5 | -5.9 | -1.6 | 1.3 | 4.5 | 9.8 | 24.5 |
| Mean ΔMAP | mmHg | TMD case | 152 | 2.3 | 4.5 | -8.7 | -4.5 | -0.3 | 1.9 | 4.9 | 9.2 | 19.2 |
| Mean ΔHR | bpm | control | 1346 | 2.6 | 4.5 | -12.4 | -5.0 | 0.1 | 2.5 | 5.2 | 9.3 | 42.9 |
| Mean ΔHR | bpm | TMD case | 152 | 2.6 | 6.3 | -17.4 | -5.3 | -0.6 | 2.2 | 5.3 | 11.8 | 34.1 |
| Mean DBP | mmHg | control | 1358 | 71.7 | 8.0 | 47.0 | 59.2 | 66.6 | 71.4 | 76.4 | 86.2 | 101.2 |
| Mean DBP | mmHg | TMD case | 156 | 72.6 | 7.6 | 55.6 | 59.6 | 67.5 | 72.6 | 76.4 | 86.2 | 98.0 |
| Mean MAP | mmHg | control | 1359 | 88.9 | 9.2 | 62.2 | 75.2 | 82.6 | 88.0 | 94.2 | 105.8 | 123.2 |
| Mean MAP | mmHg | TMD case | 155 | 88.6 | 8.4 | 69.2 | 75.4 | 82.8 | 88.0 | 94.0 | 102.0 | 112.6 |
| Mean HR | bpm | control | 1365 | 72.0 | 10.0 | 44.8 | 56.4 | 65.4 | 71.2 | 78.4 | 89.4 | 112.6 |
| Mean HR | bpm | TMD case | 155 | 75.9 | 11.6 | 54.8 | 59.2 | 67.2 | 74.8 | 83.6 | 98.0 | 115.2 |
| HR/MAP Index | bpm/mmHg | control | 1358 | 0.8 | 0.1 | 0.4 | 0.6 | 0.7 | 0.8 | 0.9 | 1.0 | 1.3 |
| HR/MAP Index | bpm/mmHg | TMD case | 154 | 0.9 | 0.2 | 0.6 | 0.7 | 0.8 | 0.8 | 1.0 | 1.2 | 1.3 |
| MeanHR (HRV) | bpm | control | 1510 | 72.1 | 10.4 | 44.6 | 56.1 | 65.1 | 71.6 | 78.4 | 89.6 | 117.6 |
| MeanHR (HRV) | bpm | TMD case | 170 | 75.7 | 11.4 | 49.3 | 58.4 | 68.7 | 73.8 | 83.8 | 97.8 | 104.9 |
| SDNN | ms | control | 1510 | 59.8 | 35.5 | 10.4 | 24.0 | 40.5 | 52.1 | 70.4 | 115.4 | 455.8 |
| SDNN | ms | TMD case | 170 | 55.3 | 36.8 | 12.4 | 19.9 | 35.2 | 48.5 | 62.0 | 120.3 | 286.0 |
| RMSSD | ms | control | 1489 | 53.5 | 44.4 | 10.0 | 17.1 | 30.1 | 42.0 | 60.8 | 124.8 | 528.9 |
| RMSSD | ms | TMD case | 165 | 46.7 | 42.2 | 10.5 | 14.1 | 25.2 | 33.1 | 53.6 | 132.1 | 259.3 |
| LogTP | ms ² | control | 1507 | 6.6 | 0.9 | 2.9 | 5.0 | 6.1 | 6.6 | 7.2 | 8.1 | 9.2 |
| LogTP | ms ² | TMD case | 170 | 6.3 | 1.1 | 2.5 | 4.6 | 5.7 | 6.4 | 7.0 | 8.0 | 9.2 |
| LogVLF | ms ² | control | 1507 | 5.5 | 1.0 | 2.3 | 3.8 | 4.8 | 5.5 | 6.1 | 7.0 | 8.4 |
| LogVLF | ms ² | TMD case | 170 | 5.3 | 1.1 | 2.6 | 3.3 | 4.6 | 5.4 | 6.1 | 6.9 | 8.2 |
| LogLF | ms ² | control | 1504 | 5.5 | 1.0 | 2.5 | 3.9 | 4.9 | 5.5 | 6.1 | 7.0 | 8.5 |
| LogLF | ms ² | TMD case | 168 | 5.3 | 1.0 | 2.5 | 3.7 | 4.7 | 5.4 | 6.0 | 7.0 | 8.1 |
| LogHF | ms ² | control | 1480 | 5.2 | 1.1 | 2.3 | 3.3 | 4.5 | 5.2 | 5.9 | 7.1 | 8.7 |
| LogHF | ms ² | TMD case | 167 | 4.9 | 1.2 | 2.4 | 3.0 | 4.2 | 4.7 | 5.6 | 7.2 | 8.6 |

Appendix Supplementary e-Table 16: Pain-Affect Stroop Autonomic Measures (5 min). Distribution of autonomic measures assessed as continuous variables in TMD cases and controls.

| Autonomic ariables | Units | Group | n | mean | sd | min | Percentiles | | | | | max |
|--------------------|-----------------|----------|------|-------|------|-------|-------------|-------|-------|-------|-------|-------|
| | | | | | | | 5th | 25th | 50th | 75th | 95th | |
| Mean ΔSBP | mmHg | control | 1319 | 0.2 | 5.7 | -23.9 | -9.2 | -3.3 | 0.2 | 3.6 | 9.6 | 23.0 |
| Mean ΔSBP | mmHg | TMD case | 154 | 0.4 | 5.6 | -11.0 | -8.5 | -3.5 | 0.2 | 3.8 | 10.8 | 16.1 |
| Mean ΔDBP | mmHg | control | 1303 | -1.3 | 5.5 | -20.8 | -10.5 | -4.7 | -1.1 | 2.1 | 7.2 | 22.9 |
| Mean ΔDBP | mmHg | TMD case | 153 | -0.2 | 5.3 | -17.9 | -8.1 | -4.0 | 0.1 | 3.0 | 8.6 | 12.3 |
| Mean ΔMAP | mmHg | control | 1310 | -0.7 | 4.8 | -17.5 | -8.8 | -3.7 | -0.7 | 2.3 | 6.7 | 20.5 |
| Mean ΔMAP | mmHg | TMD case | 154 | -0.2 | 4.5 | -12.5 | -7.5 | -3.0 | -0.4 | 2.5 | 7.3 | 14.4 |
| Mean ΔHR | bpm | control | 1316 | 2.8 | 4.3 | -19.7 | -4.5 | 0.5 | 2.9 | 5.5 | 9.5 | 24.7 |
| Mean ΔHR | bpm | TMD case | 154 | 2.6 | 6.2 | -20.1 | -4.6 | -0.6 | 2.0 | 5.5 | 13.0 | 43.2 |
| Mean SBP | mmHg | control | 1336 | 114.0 | 10.9 | 82.0 | 97.2 | 105.8 | 113.6 | 120.6 | 133.4 | 156.2 |
| Mean SBP | mmHg | TMD case | 156 | 111.3 | 9.4 | 84.2 | 97.0 | 105.5 | 111.3 | 117.9 | 127.4 | 135.0 |
| Mean DBP | mmHg | control | 1327 | 69.7 | 8.1 | 48.0 | 56.8 | 64.0 | 69.4 | 74.8 | 84.0 | 103.4 |
| Mean DBP | mmHg | TMD case | 156 | 70.0 | 8.2 | 43.4 | 57.6 | 64.1 | 70.3 | 76.6 | 82.8 | 87.2 |
| Mean MAP | mmHg | control | 1329 | 86.7 | 8.9 | 61.2 | 73.4 | 80.8 | 85.8 | 92.0 | 103.2 | 123.2 |
| Mean MAP | mmHg | TMD case | 156 | 85.8 | 8.5 | 62.4 | 72.6 | 80.2 | 85.5 | 91.5 | 101.0 | 104.8 |
| Mean HR | bpm | control | 1334 | 72.5 | 10.0 | 44.4 | 56.8 | 65.8 | 72.0 | 78.8 | 89.4 | 111.6 |
| Mean HR | bpm | TMD case | 156 | 75.5 | 11.6 | 53.8 | 58.4 | 66.7 | 74.4 | 83.0 | 97.4 | 125.2 |
| HR/MAP Index | bpm/mmHg | control | 1325 | 0.8 | 0.1 | 0.4 | 0.6 | 0.7 | 0.8 | 0.9 | 1.1 | 1.4 |
| HR/MAP Index | bpm/mmHg | TMD case | 156 | 0.9 | 0.2 | 0.6 | 0.7 | 0.8 | 0.9 | 1.0 | 1.2 | 1.4 |
| MeanHR (HRV) | bpm | control | 1511 | 72.4 | 10.4 | 44.9 | 56.1 | 65.1 | 72.3 | 78.8 | 89.7 | 112.1 |
| MeanHR (HRV) | bpm | TMD case | 170 | 76.0 | 11.6 | 50.4 | 58.5 | 67.8 | 74.8 | 83.8 | 99.0 | 106.4 |
| SDNN | ms | control | 1510 | 61.1 | 35.3 | 11.2 | 26.4 | 41.3 | 54.7 | 71.4 | 115.5 | 454.3 |
| SDNN | ms | TMD case | 169 | 55.4 | 33.2 | 15.4 | 23.4 | 35.5 | 44.9 | 67.0 | 120.2 | 239.1 |
| RMSSD | ms | control | 1488 | 52.8 | 51.8 | 10.0 | 16.7 | 29.3 | 40.3 | 60.2 | 122.8 | 805.2 |
| RMSSD | ms | TMD case | 165 | 44.0 | 40.7 | 10.0 | 13.6 | 23.2 | 32.8 | 48.9 | 120.6 | 313.3 |
| LogTP | ms ² | control | 1509 | 6.7 | 0.9 | 3.4 | 5.1 | 6.1 | 6.7 | 7.2 | 8.2 | 9.2 |
| LogTP | ms ² | TMD case | 169 | 6.4 | 1.0 | 2.6 | 4.9 | 5.7 | 6.4 | 7.1 | 7.9 | 9.2 |
| LogVLF | ms ² | control | 1504 | 5.6 | 1.0 | 2.7 | 4.0 | 5.0 | 5.6 | 6.3 | 7.3 | 8.4 |
| LogVLF | ms ² | TMD case | 168 | 5.4 | 1.0 | 2.6 | 4.0 | 4.7 | 5.3 | 6.0 | 7.1 | 8.3 |
| LogLF | ms ² | control | 1505 | 5.6 | 1.0 | 2.3 | 3.9 | 5.0 | 5.7 | 6.2 | 7.1 | 8.6 |
| LogLF | ms ² | TMD case | 169 | 5.4 | 1.0 | 2.5 | 3.9 | 4.7 | 5.5 | 6.0 | 7.1 | 8.3 |
| LogHF | ms ² | control | 1481 | 5.2 | 1.1 | 2.4 | 3.3 | 4.4 | 5.2 | 5.8 | 7.0 | 8.7 |
| LogHF | ms ² | TMD case | 166 | 4.8 | 1.2 | 2.5 | 2.8 | 4.1 | 4.8 | 5.4 | 6.9 | 8.7 |

Supplementary e-Table 17 Component Loadings for PCA Model in TMD Cases (n=183)

| | Component 1 | Component 2 | Component 3 | Component 4 | Component 5 |
|-----------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Mean SBP | 0.83 | 0.00 | -0.15 | -0.07 | -0.11 |
| Mean DBP | 0.81 | 0.00 | -0.04 | -0.04 | -0.08 |
| Mean MAP | 0.88 | -0.01 | -0.08 | -0.01 | -0.10 |
| Mean HR | 0.07 | -0.08 | 0.67 | -0.27 | -0.02 |
| ΔSBP | 0.65 | -0.18 | 0.02 | 0.18 | 0.17 |
| ΔDBP | 0.73 | 0.03 | 0.10 | 0.23 | 0.02 |
| ΔMAP | 0.79 | -0.03 | 0.15 | 0.16 | 0.15 |
| ΔHR | -0.02 | 0.04 | 0.76 | -0.05 | 0.09 |
| Stroop Color-Word Mean SBP | 0.92 | 0.00 | -0.01 | 0.01 | 0.05 |
| Stroop Color-Word Mean DBP | 0.88 | 0.05 | 0.14 | 0.01 | 0.00 |
| Stroop Color-Word Mean MAP | 0.95 | 0.06 | 0.04 | -0.01 | 0.00 |
| Stroop Color-Word Mean HR | -0.01 | -0.12 | 0.89 | -0.05 | 0.08 |
| Stroop Pain-Affect Mean SBP | 0.90 | -0.01 | -0.08 | -0.04 | 0.06 |
| Stroop Pain-Affect Mean DBP | 0.88 | 0.04 | 0.09 | -0.03 | -0.03 |
| Stroop Pain-Affect Mean MAP | 0.94 | 0.05 | -0.01 | -0.07 | 0.00 |
| Stroop Pain-Affect Mean HR | 0.02 | -0.16 | 0.92 | -0.02 | 0.13 |
| Resting Mean HR | 0.07 | 0.13 | 0.72 | -0.21 | -0.19 |
| Resting SDNN | 0.05 | 0.32 | -0.07 | 0.85 | -0.31 |
| Resting RMSSD | 0.04 | 0.57 | -0.06 | 0.63 | -0.49 |
| Resting LogTP | -0.01 | -0.16 | -0.05 | 0.98 | 0.12 |
| Resting LogVLF | 0.02 | -0.29 | -0.04 | 0.87 | 0.24 |
| Resting LogLF | 0.01 | -0.16 | -0.03 | 0.96 | 0.10 |
| Resting LogHF | -0.06 | 0.05 | -0.05 | 0.83 | 0.01 |
| Orthostatic Mean HR | -0.08 | 0.00 | 0.91 | 0.16 | -0.07 |
| Orthostatic SDNN | 0.08 | 0.02 | -0.25 | -0.10 | 0.82 |
| Orthostatic RMSSD | 0.21 | 0.32 | -0.29 | -0.26 | 0.47 |
| Orthostatic LogTP | -0.01 | -0.03 | 0.00 | 0.02 | 0.97 |
| Orthostatic LogVLF | -0.01 | -0.02 | -0.15 | -0.07 | 0.87 |
| Orthostatic LogLF | -0.03 | -0.04 | 0.18 | 0.13 | 0.95 |
| Orthostatic LogHF | 0.08 | 0.14 | -0.10 | -0.03 | 0.69 |
| Stroop Color-Word Mean HR | 0.02 | 0.07 | 0.94 | -0.06 | -0.04 |
| Stroop Color-Word SDNN | 0.05 | 1.10 | 0.05 | -0.10 | -0.06 |
| Stroop Color-Word RMSSD | 0.06 | 1.14 | -0.06 | -0.25 | -0.09 |
| Stroop Color-Word LogTP | -0.10 | 0.62 | 0.07 | 0.10 | 0.32 |
| Stroop Color-Word LogVLF | -0.09 | 0.42 | 0.06 | 0.20 | 0.31 |
| Stroop Color-Word LogLF | -0.10 | 0.56 | 0.18 | 0.11 | 0.39 |
| Stroop Color-Word LogHF | -0.08 | 0.78 | -0.08 | -0.04 | 0.14 |
| Stroop Pain-Affect Mean HR | 0.05 | 0.11 | 0.96 | 0.00 | -0.07 |
| Stroop Pain-Affect SDNN | 0.06 | 0.96 | 0.02 | -0.02 | 0.03 |
| Stroop Pain-Affect RMSSD | 0.08 | 1.13 | -0.03 | -0.13 | -0.16 |
| Stroop Pain-Affect LogTP | -0.06 | 0.50 | 0.02 | 0.25 | 0.30 |
| Stroop Pain-Affect LogVLF | -0.04 | 0.20 | -0.10 | 0.32 | 0.29 |
| Stroop Pain-Affect LogLF | -0.05 | 0.43 | 0.18 | 0.33 | 0.35 |
| Stroop Pain-Affect LogHF | -0.04 | 0.74 | -0.06 | 0.06 | 0.12 |

Supplementary e-Table 18: Component Loadings and 95% Confidence Intervals for PCA Model in Controls (n=1626)

| | Component 1 | | | Component 2 | | | Component 3 | | | Component 4 | | | Component 5 | | |
|-----------------------------|--------------|----------|--------------|--------------|----------|--------------|--------------|----------|--------------|--------------|----------|--------------|--------------|----------|--------------|
| | Lower 95% CI | Estimate | Upper 95% CI | Lower 95% CI | Estimate | Upper 95% CI | Lower 95% CI | Estimate | Upper 95% CI | Lower 95% CI | Estimate | Upper 95% CI | Lower 95% CI | Estimate | Upper 95% CI |
| Autonomic Measures | | | | | | | | | | | | | | | |
| Mean SBP | 0.83 | 0.85 | 0.86 | -0.02 | 0.03 | 0.09 | -0.06 | -0.02 | 0.02 | -0.03 | 0.02 | 0.07 | -0.11 | -0.05 | -0.01 |
| Mean DBP | 0.70 | 0.73 | 0.76 | -0.08 | 0.00 | 0.07 | 0.00 | 0.05 | 0.10 | -0.11 | -0.04 | 0.04 | -0.12 | -0.06 | -0.01 |
| Mean MAP | 0.82 | 0.84 | 0.86 | -0.04 | 0.02 | 0.08 | -0.03 | 0.01 | 0.06 | -0.06 | -0.01 | 0.05 | -0.12 | -0.06 | -0.02 |
| Mean HR | 0.04 | 0.07 | 0.09 | -0.02 | 0.03 | 0.08 | 0.75 | 0.78 | 0.81 | -0.27 | -0.22 | -0.17 | -0.02 | 0.01 | 0.04 |
| ΔSBP | 0.63 | 0.67 | 0.70 | -0.11 | -0.03 | 0.06 | -0.06 | 0.00 | 0.07 | -0.07 | 0.02 | 0.09 | 0.03 | 0.09 | 0.19 |
| ΔDBP | 0.69 | 0.72 | 0.75 | -0.09 | -0.03 | 0.04 | 0.00 | 0.06 | 0.11 | -0.01 | 0.06 | 0.12 | -0.02 | 0.02 | 0.08 |
| ΔMAP | 0.77 | 0.80 | 0.82 | -0.08 | 0.00 | 0.07 | -0.02 | 0.03 | 0.09 | -0.01 | 0.06 | 0.12 | 0.01 | 0.06 | 0.14 |
| ΔHR | -0.14 | -0.10 | -0.06 | 0.02 | 0.11 | 0.20 | 0.68 | 0.74 | 0.78 | 0.10 | 0.17 | 0.25 | -0.19 | -0.08 | -0.02 |
| Stroop Color-Word Mean SBP | 0.90 | 0.91 | 0.93 | -0.02 | 0.03 | 0.07 | -0.07 | -0.03 | 0.00 | -0.03 | 0.01 | 0.06 | -0.03 | 0.02 | 0.05 |
| Stroop Color-Word Mean DBP | 0.86 | 0.87 | 0.88 | -0.08 | -0.03 | 0.01 | -0.02 | 0.02 | 0.05 | -0.05 | -0.01 | 0.04 | -0.05 | -0.01 | 0.03 |
| Stroop Color-Word Mean MAP | 0.94 | 0.95 | 0.96 | -0.04 | 0.01 | 0.05 | -0.06 | -0.03 | 0.00 | -0.03 | 0.00 | 0.05 | -0.04 | 0.00 | 0.02 |
| Stroop Color-Word Mean HR | -0.03 | -0.01 | 0.01 | -0.16 | -0.12 | -0.09 | 0.91 | 0.93 | 0.96 | 0.01 | 0.04 | 0.07 | 0.02 | 0.05 | 0.09 |
| Stroop Pain-Affect Mean SBP | 0.90 | 0.91 | 0.93 | 0.00 | 0.05 | 0.10 | -0.06 | -0.03 | 0.01 | -0.01 | 0.03 | 0.08 | -0.05 | 0.00 | 0.03 |
| Stroop Pain-Affect Mean DBP | 0.83 | 0.84 | 0.86 | -0.09 | -0.04 | 0.00 | -0.01 | 0.03 | 0.07 | -0.06 | -0.02 | 0.03 | -0.04 | 0.00 | 0.04 |
| Stroop Pain-Affect Mean MAP | 0.93 | 0.94 | 0.95 | -0.03 | 0.01 | 0.04 | -0.05 | -0.02 | 0.01 | -0.03 | 0.00 | 0.04 | -0.04 | -0.01 | 0.02 |
| Stroop Pain-Affect Mean HR | -0.03 | -0.01 | 0.01 | -0.14 | -0.11 | -0.07 | 0.94 | 0.96 | 0.98 | 0.05 | 0.08 | 0.11 | 0.01 | 0.04 | 0.07 |
| Resting Mean HR | 0.01 | 0.05 | 0.07 | -0.06 | 0.00 | 0.07 | 0.73 | 0.77 | 0.81 | -0.24 | -0.17 | -0.09 | -0.03 | 0.02 | 0.06 |
| Resting SDNN | -0.03 | 0.01 | 0.04 | -0.06 | 0.00 | 0.11 | -0.08 | -0.02 | 0.02 | 0.71 | 0.84 | 0.92 | -0.08 | -0.03 | 0.02 |
| Resting RMSSD | -0.07 | -0.02 | 0.02 | -0.07 | 0.04 | 0.19 | -0.12 | -0.05 | 0.01 | 0.43 | 0.61 | 0.74 | -0.12 | -0.04 | 0.04 |
| Resting LogTP | 0.01 | 0.03 | 0.05 | -0.08 | -0.04 | 0.01 | -0.01 | 0.01 | 0.04 | 0.96 | 1.00 | 1.02 | -0.03 | -0.01 | 0.03 |
| Resting LogVLF | 0.02 | 0.05 | 0.09 | -0.16 | -0.09 | -0.01 | -0.14 | -0.10 | -0.06 | 0.78 | 0.85 | 0.90 | -0.04 | 0.00 | 0.07 |
| Resting LogLF | 0.02 | 0.05 | 0.08 | -0.09 | -0.05 | 0.01 | 0.06 | 0.09 | 0.12 | 0.93 | 0.97 | 1.00 | 0.00 | 0.04 | 0.08 |
| Resting LogHF | -0.08 | -0.06 | -0.03 | 0.00 | 0.04 | 0.10 | 0.03 | 0.08 | 0.11 | 0.83 | 0.88 | 0.91 | -0.06 | -0.03 | 0.01 |
| Orthostatic Mean HR | -0.11 | -0.08 | -0.04 | 0.03 | 0.10 | 0.17 | 0.82 | 0.87 | 0.90 | 0.09 | 0.15 | 0.21 | -0.29 | -0.19 | -0.13 |
| Orthostatic SDNN | -0.03 | 0.00 | 0.02 | -0.04 | 0.01 | 0.08 | -0.09 | -0.05 | -0.02 | -0.13 | -0.08 | -0.03 | 0.89 | 0.96 | 0.98 |
| Orthostatic RMSSD | -0.02 | 0.02 | 0.05 | -0.06 | 0.06 | 0.24 | 0.02 | 0.09 | 0.15 | -0.37 | -0.26 | -0.16 | 0.79 | 0.93 | 0.99 |
| Orthostatic LogTP | -0.05 | -0.02 | 0.00 | -0.07 | -0.02 | 0.04 | -0.07 | -0.04 | 0.00 | 0.08 | 0.15 | 0.22 | 0.85 | 0.88 | 0.91 |
| Orthostatic LogVLF | -0.05 | -0.02 | 0.01 | -0.12 | -0.05 | 0.03 | -0.23 | -0.20 | -0.15 | 0.05 | 0.13 | 0.20 | 0.68 | 0.72 | 0.77 |
| Orthostatic LogLF | -0.08 | -0.04 | -0.01 | -0.07 | 0.00 | 0.08 | 0.07 | 0.11 | 0.16 | 0.14 | 0.22 | 0.31 | 0.76 | 0.81 | 0.85 |
| Orthostatic LogHF | -0.03 | 0.00 | 0.03 | 0.02 | 0.06 | 0.12 | 0.05 | 0.09 | 0.13 | -0.06 | -0.02 | 0.03 | 0.85 | 0.91 | 0.95 |
| Stroop Color-Word Mean HR | -0.01 | 0.01 | 0.04 | -0.05 | 0.02 | 0.10 | 0.92 | 0.95 | 0.98 | -0.09 | -0.03 | 0.00 | 0.01 | 0.06 | 0.11 |
| Stroop Color-Word SDNN | 0.01 | 0.04 | 0.06 | 0.95 | 0.99 | 1.03 | -0.01 | 0.03 | 0.07 | -0.16 | -0.10 | -0.05 | -0.10 | -0.04 | 0.01 |
| Stroop Color-Word RMSSD | 0.00 | 0.03 | 0.05 | 0.93 | 1.00 | 1.05 | -0.09 | -0.03 | 0.02 | -0.27 | -0.22 | -0.15 | -0.14 | -0.05 | 0.02 |
| Stroop Color-Word LogTP | -0.02 | 0.01 | 0.03 | 0.75 | 0.82 | 0.89 | -0.07 | -0.02 | 0.02 | 0.06 | 0.14 | 0.21 | -0.04 | 0.01 | 0.07 |
| Stroop Color-Word LogVLF | -0.02 | 0.02 | 0.06 | 0.51 | 0.60 | 0.70 | -0.17 | -0.11 | -0.04 | 0.06 | 0.15 | 0.25 | -0.07 | -0.01 | 0.07 |
| Stroop Color-Word LogLF | -0.02 | 0.02 | 0.04 | 0.71 | 0.78 | 0.86 | 0.05 | 0.10 | 0.15 | 0.08 | 0.16 | 0.24 | -0.01 | 0.05 | 0.11 |
| Stroop Color-Word LogHF | -0.05 | -0.02 | 0.01 | 0.81 | 0.86 | 0.90 | -0.10 | -0.05 | -0.01 | -0.03 | 0.03 | 0.08 | -0.08 | -0.04 | 0.01 |
| Stroop Pain-Affect Mean HR | -0.02 | 0.01 | 0.03 | -0.07 | 0.00 | 0.07 | 0.95 | 0.98 | 1.00 | -0.04 | 0.02 | 0.05 | 0.02 | 0.06 | 0.11 |
| Stroop Pain-Affect SDNN | -0.02 | 0.01 | 0.04 | 0.81 | 0.93 | 1.00 | -0.03 | 0.03 | 0.09 | -0.17 | -0.11 | -0.01 | -0.03 | 0.04 | 0.12 |

Supplementary e-Table 19: Component Loadings and 95% Confidence Intervals for PCA Model in TMD Cases (n=183)

| | Component 1 | | | Component 2 | | | Component 3 | | | Component 4 | | | Component 5 | | |
|-----------------------------|--------------|----------|--------------|--------------|----------|--------------|--------------|----------|--------------|--------------|----------|--------------|--------------|----------|--------------|
| | Lower 95% CI | Estimate | Upper 95% CI | Lower 95% CI | Estimate | Upper 95% CI | Lower 95% CI | Estimate | Upper 95% CI | Lower 95% CI | Estimate | Upper 95% CI | Lower 95% CI | Estimate | Upper 95% CI |
| Autonomic Measures | | | | | | | | | | | | | | | |
| Mean SBP | 0.75 | 0.83 | 0.88 | -0.13 | 0.00 | 0.10 | -0.26 | -0.15 | -0.04 | -0.25 | -0.07 | 0.13 | -0.29 | -0.11 | 0.08 |
| Mean DBP | 0.72 | 0.81 | 0.88 | -0.17 | 0.00 | 0.16 | -0.15 | -0.04 | 0.08 | -0.21 | -0.04 | 0.14 | -0.30 | -0.08 | 0.14 |
| Mean MAP | 0.81 | 0.88 | 0.93 | -0.15 | -0.01 | 0.10 | -0.17 | -0.08 | 0.02 | -0.18 | -0.01 | 0.14 | -0.28 | -0.10 | 0.09 |
| Mean HR | -0.03 | 0.07 | 0.15 | -0.21 | -0.08 | 0.02 | 0.58 | 0.67 | 0.75 | -0.41 | -0.27 | -0.12 | -0.20 | -0.02 | 0.12 |
| ΔSBP | 0.32 | 0.65 | 0.75 | -0.38 | -0.18 | 0.08 | -0.16 | 0.02 | 0.20 | -0.10 | 0.18 | 0.49 | -0.31 | 0.17 | 0.65 |
| ΔDBP | 0.48 | 0.73 | 0.81 | -0.13 | 0.03 | 0.26 | -0.07 | 0.10 | 0.27 | -0.05 | 0.23 | 0.49 | -0.35 | 0.02 | 0.38 |
| ΔMAP | 0.49 | 0.79 | 0.87 | -0.18 | -0.03 | 0.23 | -0.01 | 0.15 | 0.30 | -0.07 | 0.16 | 0.43 | -0.30 | 0.15 | 0.50 |
| ΔHR | -0.14 | -0.02 | 0.15 | -0.22 | 0.04 | 0.38 | 0.60 | 0.76 | 0.86 | -0.29 | -0.05 | 0.22 | -0.37 | 0.09 | 0.33 |
| Stroop Color-Word Mean SBP | 0.88 | 0.92 | 0.96 | -0.11 | 0.00 | 0.12 | -0.12 | -0.01 | 0.08 | -0.09 | 0.01 | 0.13 | -0.12 | 0.05 | 0.18 |
| Stroop Color-Word Mean DBP | 0.83 | 0.88 | 0.93 | -0.09 | 0.05 | 0.15 | 0.03 | 0.14 | 0.23 | -0.15 | 0.01 | 0.16 | -0.16 | 0.00 | 0.20 |
| Stroop Color-Word Mean MAP | 0.93 | 0.95 | 0.99 | -0.06 | 0.06 | 0.14 | -0.05 | 0.04 | 0.11 | -0.13 | -0.01 | 0.11 | -0.12 | 0.00 | 0.15 |
| Stroop Color-Word Mean HR | -0.09 | -0.01 | 0.05 | -0.21 | -0.12 | -0.01 | 0.82 | 0.89 | 0.94 | -0.16 | -0.05 | 0.07 | -0.04 | 0.08 | 0.16 |
| Stroop Pain-Affect Mean SBP | 0.87 | 0.90 | 0.94 | -0.12 | -0.01 | 0.09 | -0.18 | -0.08 | 0.01 | -0.15 | -0.04 | 0.09 | -0.09 | 0.06 | 0.20 |
| Stroop Pain-Affect Mean DBP | 0.84 | 0.88 | 0.94 | -0.12 | 0.04 | 0.14 | 0.00 | 0.09 | 0.19 | -0.18 | -0.03 | 0.10 | -0.17 | -0.03 | 0.18 |
| Stroop Pain-Affect Mean MAP | 0.91 | 0.94 | 0.98 | -0.08 | 0.05 | 0.12 | -0.08 | -0.01 | 0.06 | -0.17 | -0.07 | 0.04 | -0.12 | 0.00 | 0.16 |
| Stroop Pain-Affect Mean HR | -0.06 | 0.02 | 0.08 | -0.22 | -0.16 | -0.07 | 0.86 | 0.92 | 0.96 | -0.13 | -0.02 | 0.08 | 0.00 | 0.13 | 0.20 |
| Resting Mean HR | -0.04 | 0.07 | 0.14 | -0.16 | 0.13 | 0.39 | 0.62 | 0.72 | 0.82 | -0.44 | -0.21 | -0.01 | -0.39 | -0.19 | 0.07 |
| Resting SDNN | -0.07 | 0.05 | 0.13 | -0.11 | 0.32 | 0.92 | -0.17 | -0.07 | 0.04 | 0.25 | 0.85 | 1.00 | -0.38 | -0.31 | 0.09 |
| Resting RMSSD | -0.13 | 0.04 | 0.12 | -0.10 | 0.57 | 1.12 | -0.24 | -0.06 | 0.09 | -0.01 | 0.63 | 0.89 | -0.54 | -0.49 | 0.18 |
| Resting LogTP | -0.10 | -0.01 | 0.08 | -0.20 | -0.16 | 0.23 | -0.16 | -0.05 | 0.03 | 0.55 | 0.98 | 1.06 | -0.07 | 0.12 | 0.60 |
| Resting LogVLF | -0.08 | 0.02 | 0.14 | -0.36 | -0.29 | 0.10 | -0.18 | -0.04 | 0.07 | 0.42 | 0.87 | 1.01 | -0.17 | 0.24 | 0.72 |
| Resting LogLF | -0.09 | 0.01 | 0.11 | -0.25 | -0.16 | 0.27 | -0.15 | -0.03 | 0.06 | 0.52 | 0.96 | 1.05 | -0.09 | 0.10 | 0.55 |
| Resting LogHF | -0.16 | -0.06 | 0.03 | -0.13 | 0.05 | 0.47 | -0.16 | -0.05 | 0.07 | 0.40 | 0.83 | 0.96 | -0.13 | 0.01 | 0.40 |
| Orthostatic Mean HR | -0.16 | -0.08 | 0.05 | -0.21 | 0.00 | 0.23 | 0.79 | 0.91 | 0.99 | -0.03 | 0.16 | 0.32 | -0.42 | -0.07 | 0.15 |
| Orthostatic SDNN | -0.05 | 0.08 | 0.18 | -0.10 | 0.02 | 0.46 | -0.39 | -0.25 | -0.10 | -0.17 | -0.10 | 0.22 | 0.42 | 0.82 | 0.92 |
| Orthostatic RMSSD | 0.01 | 0.21 | 0.34 | 0.04 | 0.32 | 0.63 | -0.48 | -0.29 | -0.10 | -0.40 | -0.26 | 0.03 | 0.10 | 0.47 | 0.79 |
| Orthostatic LogTP | -0.13 | -0.01 | 0.10 | -0.17 | -0.03 | 0.51 | -0.13 | 0.00 | 0.11 | -0.10 | 0.02 | 0.39 | 0.44 | 0.97 | 1.05 |
| Orthostatic LogVLF | -0.14 | -0.01 | 0.11 | -0.15 | -0.02 | 0.46 | -0.30 | -0.15 | -0.01 | -0.18 | -0.07 | 0.28 | 0.39 | 0.87 | 0.98 |
| Orthostatic LogLF | -0.15 | -0.03 | 0.09 | -0.20 | -0.04 | 0.51 | 0.05 | 0.18 | 0.28 | -0.03 | 0.13 | 0.48 | 0.40 | 0.95 | 1.06 |
| Orthostatic LogHF | -0.08 | 0.08 | 0.19 | -0.04 | 0.14 | 0.47 | -0.25 | -0.10 | 0.07 | -0.18 | -0.03 | 0.28 | 0.22 | 0.69 | 0.88 |
| Stroop Color-Word Mean HR | -0.05 | 0.02 | 0.07 | -0.11 | 0.07 | 0.19 | 0.88 | 0.94 | 0.99 | -0.18 | -0.06 | 0.05 | -0.11 | -0.04 | 0.05 |
| Stroop Color-Word SDNN | -0.03 | 0.05 | 0.12 | 0.92 | 1.10 | 1.15 | -0.04 | 0.05 | 0.12 | -0.22 | -0.10 | 0.05 | -0.15 | -0.06 | 0.14 |
| Stroop Color-Word RMSSD | -0.04 | 0.06 | 0.14 | 0.90 | 1.14 | 1.19 | -0.17 | -0.06 | 0.01 | -0.36 | -0.25 | -0.04 | -0.24 | -0.09 | 0.15 |
| Stroop Color-Word LogTP | -0.16 | -0.10 | 0.00 | 0.37 | 0.62 | 0.89 | -0.04 | 0.07 | 0.14 | -0.05 | 0.10 | 0.37 | -0.04 | 0.32 | 0.64 |
| Stroop Color-Word LogVLF | -0.18 | -0.09 | 0.04 | 0.20 | 0.42 | 0.74 | -0.10 | 0.06 | 0.17 | -0.05 | 0.20 | 0.54 | -0.12 | 0.31 | 0.63 |
| Stroop Color-Word LogLF | -0.18 | -0.10 | 0.02 | 0.30 | 0.56 | 0.86 | 0.04 | 0.18 | 0.27 | -0.06 | 0.11 | 0.37 | 0.01 | 0.39 | 0.71 |
| Stroop Color-Word LogHF | -0.16 | -0.08 | 0.00 | 0.53 | 0.78 | 0.93 | -0.17 | -0.08 | 0.00 | -0.14 | -0.04 | 0.15 | -0.10 | 0.14 | 0.40 |
| Stroop Pain-Affect Mean HR | -0.03 | 0.05 | 0.11 | -0.15 | 0.11 | 0.36 | 0.89 | 0.96 | 1.01 | -0.17 | 0.00 | 0.11 | -0.19 | -0.07 | 0.12 |
| Stroop Pain-Affect SDNN | -0.02 | 0.06 | 0.12 | 0.72 | 0.96 | 1.05 | -0.06 | 0.02 | 0.08 | -0.13 | -0.02 | 0.16 | -0.09 | 0.03 | 0.29 |
| Stroop Pain-Affect RMSSD | -0.01 | 0.08 | 0.14 | 0.84 | 1.13 | 1.16 | -0.16 | -0.03 | 0.05 | -0.29 | -0.13 | 0.10 | -0.22 | -0.16 | 0.15 |

Supplementary e-Table 20: Differences in Component Loadings and 95% Confidence Intervals for PCA Model between Controls (n=1626) and TMD Cases (n=183)

| Autonomic Measures | Component 1 | | | | Component 2 | | | | Component 3 | | | | Component 4 | | | | Component 5 | | | |
|-----------------------------|----------------------|-------------------|----------------|-------------|----------------------|-------------------|----------------|-------------|----------------------|-------------------|----------------|-------------|----------------------|-------------------|----------------|-------------|----------------------|-------------------|----------------|-------------|
| | loading (control) | loading (case) | differe nce | p- value | loading (control) | loading (case) | differe nce | p- value | loading (control) | loading (case) | differe nce | p- value | loading (control) | loading (case) | differe nce | p- value | loading (control) | loading (case) | differe nce | p- value |
| Mean SBP | 0.85 | 0.83 | 0.02 | 0.51 | 0.03 | 0.00 | 0.03 | 0.73 | -0.02 | -0.15 | 0.13 | 0.04 | 0.02 | -0.07 | 0.09 | 0.32 | -0.05 | -0.11 | 0.06 | 0.49 |
| Mean DBP | 0.73 | 0.81 | -0.08 | 0.10 | 0.00 | 0.00 | 0.00 | 0.98 | 0.05 | -0.04 | 0.09 | 0.27 | -0.04 | -0.04 | 0.00 | 0.97 | -0.06 | -0.08 | 0.02 | 0.90 |
| Mean MAP | 0.84 | 0.88 | -0.03 | 0.33 | 0.02 | -0.01 | 0.03 | 0.78 | 0.01 | -0.08 | 0.09 | 0.15 | -0.01 | -0.01 | 0.01 | 0.92 | -0.06 | -0.10 | 0.04 | 0.68 |
| Mean HR | 0.07 | 0.07 | -0.01 | 0.88 | 0.03 | -0.08 | 0.10 | 0.24 | 0.78 | 0.67 | 0.10 | 0.05 | -0.22 | -0.27 | 0.05 | 0.55 | 0.01 | -0.02 | 0.03 | 0.60 |
| ΔSBP | 0.67 | 0.65 | 0.02 | 0.68 | -0.03 | -0.18 | 0.16 | 0.22 | 0.00 | 0.02 | -0.02 | 0.84 | 0.02 | 0.18 | -0.16 | 0.22 | 0.09 | 0.17 | -0.08 | 0.60 |
| ΔDBP | 0.72 | 0.73 | -0.01 | 0.90 | -0.03 | 0.03 | -0.06 | 0.56 | 0.06 | 0.10 | -0.04 | 0.61 | 0.06 | 0.23 | -0.17 | 0.12 | 0.02 | 0.02 | 0.01 | 0.94 |
| ΔMAP | 0.80 | 0.79 | 0.01 | 0.82 | 0.00 | -0.03 | 0.02 | 0.85 | 0.03 | 0.15 | -0.12 | 0.16 | 0.06 | 0.16 | -0.10 | 0.38 | 0.06 | 0.15 | -0.09 | 0.43 |
| ΔHR | -0.10 | -0.02 | -0.08 | 0.27 | 0.11 | 0.04 | 0.07 | 0.67 | 0.74 | 0.76 | -0.02 | 0.78 | 0.17 | -0.05 | 0.23 | 0.08 | -0.08 | 0.09 | -0.17 | 0.24 |
| Stroop Color-Word Mean SBP | 0.91 | 0.92 | -0.01 | 0.73 | 0.03 | 0.00 | 0.03 | 0.75 | -0.03 | -0.01 | -0.02 | 0.74 | 0.01 | 0.01 | 0.00 | 0.96 | 0.02 | 0.05 | -0.03 | 0.70 |
| Stroop Color-Word Mean DBP | 0.87 | 0.88 | -0.01 | 0.77 | -0.03 | 0.05 | -0.08 | 0.26 | 0.02 | 0.14 | -0.12 | 0.04 | -0.01 | 0.01 | -0.01 | 0.88 | -0.01 | 0.00 | -0.01 | 0.87 |
| Stroop Color-Word Mean MAP | 0.95 | 0.95 | 0.00 | 0.85 | 0.01 | 0.06 | -0.05 | 0.45 | -0.03 | 0.04 | -0.07 | 0.15 | 0.00 | -0.01 | 0.02 | 0.78 | 0.00 | 0.00 | 0.00 | 0.95 |
| Stroop Color-Word Mean HR | -0.01 | -0.01 | 0.00 | 0.98 | -0.12 | -0.12 | 0.00 | 0.99 | 0.93 | 0.89 | 0.04 | 0.30 | 0.04 | -0.05 | 0.09 | 0.13 | 0.05 | 0.08 | -0.02 | 0.68 |
| Stroop Pain-Affect Mean SBP | 0.91 | 0.90 | 0.01 | 0.57 | 0.05 | -0.01 | 0.06 | 0.45 | -0.03 | -0.08 | 0.05 | 0.42 | 0.03 | -0.04 | 0.07 | 0.33 | 0.00 | 0.06 | -0.06 | 0.41 |
| Stroop Pain-Affect Mean DBP | 0.84 | 0.88 | -0.04 | 0.12 | -0.04 | 0.04 | -0.08 | 0.29 | 0.03 | 0.09 | -0.06 | 0.29 | -0.02 | -0.03 | 0.01 | 0.92 | 0.00 | -0.03 | 0.03 | 0.64 |
| Stroop Pain-Affect Mean MAP | 0.94 | 0.94 | 0.00 | 0.98 | 0.01 | 0.05 | -0.03 | 0.55 | -0.02 | -0.01 | -0.01 | 0.81 | 0.00 | -0.07 | 0.07 | 0.26 | -0.01 | 0.00 | -0.01 | 0.92 |
| Stroop Pain-Affect Mean HR | -0.01 | 0.02 | -0.03 | 0.35 | -0.11 | -0.16 | 0.06 | 0.33 | 0.96 | 0.92 | 0.04 | 0.26 | 0.08 | -0.02 | 0.10 | 0.08 | 0.04 | 0.13 | -0.09 | 0.10 |
| Resting Mean HR | 0.05 | 0.07 | -0.03 | 0.57 | 0.00 | 0.13 | -0.13 | 0.29 | 0.77 | 0.72 | 0.06 | 0.38 | -0.17 | -0.21 | 0.05 | 0.73 | 0.02 | -0.19 | 0.21 | 0.07 |
| Resting SDNN | 0.01 | 0.05 | -0.05 | 0.38 | 0.00 | 0.32 | -0.32 | 0.09 | -0.02 | -0.07 | 0.05 | 0.56 | 0.84 | 0.85 | -0.01 | 0.94 | -0.03 | -0.31 | 0.28 | 0.06 |
| Resting RMSSD | -0.02 | 0.04 | -0.07 | 0.32 | 0.04 | 0.57 | -0.52 | 0.06 | -0.05 | -0.06 | 0.01 | 0.89 | 0.61 | 0.63 | -0.02 | 0.94 | -0.04 | -0.49 | 0.45 | 0.05 |
| Resting LogTP | 0.03 | -0.01 | 0.03 | 0.36 | -0.04 | -0.16 | 0.12 | 0.20 | 0.01 | -0.05 | 0.06 | 0.18 | 1.00 | 0.98 | 0.02 | 0.78 | -0.01 | 0.12 | -0.12 | 0.12 |
| Resting LogVLF | 0.05 | 0.02 | 0.03 | 0.61 | -0.09 | -0.29 | 0.20 | 0.14 | -0.10 | -0.04 | -0.06 | 0.41 | 0.85 | 0.87 | -0.02 | 0.82 | 0.00 | 0.24 | -0.24 | 0.09 |
| Resting LogLF | 0.05 | 0.01 | 0.04 | 0.38 | -0.05 | -0.16 | 0.11 | 0.27 | 0.09 | -0.03 | 0.12 | 0.03 | 0.97 | 0.96 | 0.01 | 0.87 | 0.04 | 0.10 | -0.06 | 0.45 |
| Resting LogHF | -0.06 | -0.06 | 0.00 | 0.95 | 0.04 | 0.05 | 0.00 | 0.96 | 0.08 | -0.05 | 0.13 | 0.07 | 0.88 | 0.83 | 0.05 | 0.50 | -0.03 | 0.01 | -0.03 | 0.59 |
| Orthostatic Mean HR | -0.08 | -0.08 | 0.00 | 0.95 | 0.10 | 0.00 | 0.10 | 0.43 | 0.87 | 0.91 | -0.05 | 0.50 | 0.15 | 0.16 | -0.01 | 0.93 | -0.19 | -0.07 | -0.12 | 0.42 |
| Orthostatic SDNN | 0.00 | 0.08 | -0.08 | 0.08 | 0.01 | 0.02 | -0.01 | 0.91 | -0.05 | -0.25 | 0.20 | 0.03 | -0.08 | -0.10 | 0.02 | 0.83 | 0.96 | 0.82 | 0.14 | 0.25 |
| Orthostatic RMSSD | 0.02 | 0.21 | -0.20 | 0.01 | 0.06 | 0.32 | -0.26 | 0.20 | 0.09 | -0.29 | 0.38 | 0.02 | -0.26 | -0.26 | 0.00 | 0.99 | 0.93 | 0.47 | 0.46 | 0.07 |
| Orthostatic LogTP | -0.02 | -0.01 | -0.01 | 0.75 | -0.02 | -0.03 | 0.01 | 0.92 | -0.04 | 0.00 | -0.04 | 0.42 | 0.15 | 0.02 | 0.12 | 0.29 | 0.88 | 0.97 | -0.09 | 0.28 |
| Orthostatic LogVLF | -0.02 | -0.01 | -0.01 | 0.88 | -0.05 | -0.02 | -0.03 | 0.80 | -0.20 | -0.15 | -0.04 | 0.55 | 0.13 | -0.07 | 0.19 | 0.15 | 0.72 | 0.87 | -0.15 | 0.13 |
| Orthostatic LogLF | -0.04 | -0.03 | -0.01 | 0.88 | 0.00 | -0.04 | 0.04 | 0.76 | 0.11 | 0.18 | -0.07 | 0.33 | 0.22 | 0.13 | 0.09 | 0.52 | 0.81 | 0.95 | -0.14 | 0.20 |
| Orthostatic LogHF | 0.00 | 0.08 | -0.08 | 0.14 | 0.06 | 0.14 | -0.08 | 0.46 | 0.09 | -0.10 | 0.19 | 0.03 | -0.02 | -0.03 | 0.01 | 0.88 | 0.91 | 0.69 | 0.23 | 0.10 |
| Stroop Color-Word Mean HR | 0.01 | 0.02 | -0.01 | 0.91 | 0.02 | 0.07 | -0.05 | 0.69 | 0.95 | 0.94 | 0.01 | 0.81 | -0.03 | -0.06 | 0.02 | 0.74 | 0.06 | -0.04 | 0.10 | 0.21 |
| Stroop Color-Word SDNN | 0.04 | 0.05 | -0.01 | 0.73 | 0.99 | 1.10 | -0.11 | 0.16 | 0.03 | 0.05 | -0.01 | 0.80 | -0.10 | -0.10 | 0.00 | 0.98 | -0.04 | -0.06 | 0.03 | 0.77 |
| Stroop Color-Word RMSSD | 0.03 | 0.06 | -0.03 | 0.51 | 1.00 | 1.14 | -0.14 | 0.20 | -0.03 | -0.06 | 0.03 | 0.68 | -0.22 | -0.25 | 0.04 | 0.75 | -0.05 | -0.09 | 0.04 | 0.70 |
| Stroop Color-Word LogTP | 0.01 | -0.10 | 0.10 | 0.01 | 0.82 | 0.62 | 0.20 | 0.09 | -0.02 | 0.07 | -0.09 | 0.12 | 0.14 | 0.10 | 0.04 | 0.77 | 0.01 | 0.32 | -0.31 | 0.03 |
| Stroop Color-Word LogVLF | 0.02 | -0.09 | 0.11 | 0.08 | 0.60 | 0.42 | 0.19 | 0.25 | -0.11 | 0.06 | -0.17 | 0.07 | 0.15 | 0.20 | -0.05 | 0.79 | -0.01 | 0.31 | -0.32 | 0.04 |
| Stroop Color-Word LogLF | 0.02 | -0.10 | 0.12 | 0.02 | 0.78 | 0.56 | 0.23 | 0.08 | 0.10 | 0.18 | -0.08 | 0.27 | 0.16 | 0.11 | 0.05 | 0.67 | 0.05 | 0.39 | -0.34 | 0.03 |
| Stroop Color-Word LogHF | -0.02 | -0.08 | 0.06 | 0.14 | 0.86 | 0.78 | 0.08 | 0.34 | -0.05 | -0.08 | 0.03 | 0.69 | 0.03 | -0.04 | 0.06 | 0.48 | -0.04 | 0.14 | -0.18 | 0.07 |
| Stroop Pain-Affect Mean HR | 0.01 | 0.05 | -0.04 | 0.21 | 0.00 | 0.11 | -0.12 | 0.31 | 0.98 | 0.96 | 0.02 | 0.62 | 0.02 | 0.00 | 0.02 | 0.77 | 0.06 | -0.07 | 0.13 | 0.13 |
| Stroop Pain-Affect SDNN | 0.01 | 0.06 | -0.05 | 0.30 | 0.93 | 0.96 | -0.03 | 0.79 | 0.03 | 0.02 | 0.02 | 0.85 | -0.11 | -0.02 | -0.10 | 0.39 | 0.04 | 0.03 | 0.01 | 0.95 |
| Stroop Pain-Affect RMSSD | 0.01 | 0.08 | -0.08 | 0.14 | 0.93 | 1.13 | -0.20 | 0.25 | 0.01 | -0.03 | 0.04 | 0.70 | -0.27 | -0.13 | -0.14 | 0.42 | 0.04 | -0.16 | 0.20 | 0.29 |
| Stroop Pain-Affect LogTP | -0.01 | -0.06 | 0.05 | 0.36 | 0.71 | 0.50 | 0.21 | 0.21 | -0.07 | 0.02 | -0.09 | 0.20 | 0.19 | 0.25 | -0.06 | 0.65 | 0.04 | 0.30 | -0.26 | 0.08 |

Supplementary e-Table 21: Summary of Missing Data

| | Controls | | TMD Cases | | |
|--|-------------------------|----------------|------------------------|-------------------------|------------------------|
| | Number Complete Data | Number Imputed | Number Invalid Data | Number Complete Data | Number Invalid Data |
| Baseline Resting Autonomic Measures – Reclined (20 min) | | | | | |
| Mean SBP | 1580 | 15 | 38 | 182 | 3 |
| Mean DBP | 1576 | 19 | 38 | 181 | 3 |
| Mean MAP | 1578 | 15 | 40 | 182 | 3 |
| Mean HR | 1572 | 19 | 42 | 182 | 3 |
| HR/MAP Index | 1544 | 18 | 71 | 178 | 7 |
| MeanHR (HRV) | 1517 | 0 | 116 | 170 | 15 |
| SDNN | 1513 | 0 | 120 | 170 | 15 |
| RMSSD | 1504 | 0 | 129 | 168 | 17 |
| LogTP | 1507 | 0 | 126 | 169 | 16 |
| LogVLF | 1511 | 0 | 122 | 170 | 15 |
| LogLF | 1503 | 0 | 130 | 169 | 16 |
| LogHF | 1494 | 0 | 139 | 166 | 19 |
| Orthostatic Challenge Autonomic Measures (5 min) | | | | | |
| ΔSBP | 1522 | 12 | 99 | 178 | 7 |
| ΔDBP | 1505 | 16 | 112 | 176 | 8 |
| ΔMAP | 1515 | 12 | 106 | 178 | 7 |
| ΔHR | 1515 | 16 | 102 | 178 | 7 |
| MeanHR (HRV) | 1501 | 0 | 132 | 170 | 15 |
| SDNN | 1496 | 0 | 137 | 170 | 15 |
| RMSSD | 1457 | 0 | 176 | 161 | 24 |
| LogTP | 1491 | 0 | 142 | 170 | 15 |
| LogVLF | 1492 | 0 | 141 | 170 | 15 |
| LogLF | 1489 | 0 | 144 | 166 | 19 |
| LogHF | 1433 | 0 | 200 | 159 | 26 |
| Color-Word Stroop Autonomic Measures (5 min) | | | | | |
| Mean ΔSBP | 1347 | 246 | 40 | 153 | 3 |
| Mean ΔDBP | 1336 | 256 | 41 | 152 | 3 |
| Mean ΔMAP | 1339 | 253 | 41 | 152 | 3 |
| Mean ΔHR | 1346 | 247 | 40 | 152 | 3 |
| Mean SBP | 1364 | 230 | 39 | 156 | 3 |
| Mean DBP | 1358 | 235 | 40 | 156 | 3 |
| Mean MAP | 1359 | 234 | 40 | 155 | 3 |
| Mean HR | 1365 | 229 | 39 | 155 | 3 |
| HR/MAP Index | 1358 | 235 | 40 | 154 | 3 |
| MeanHR (HRV) | 1510 | 0 | 123 | 170 | 15 |
| SDNN | 1510 | 0 | 123 | 170 | 15 |
| RMSSD | 1489 | 0 | 144 | 165 | 20 |
| LogTP | 1507 | 0 | 126 | 170 | 15 |
| LogVLF | 1507 | 0 | 126 | 170 | 15 |