

Supplement Table 1. Comparison of clinical and peripheral body temperature of MDD patients before and after treatment.

Variables	MDD Patients (N = 24)								Normal Participants (N = 15)			
	WITH suicide risk (N = 14)				WITHOUT suicide risk (N = 10)							
	Before treatment	After treatment	<i>T</i>	<i>P</i>	Before treatment	After treatment	<i>T</i>	<i>P</i>	Before treatment	After treatment	<i>T</i>	<i>P</i>
Clinical characteristics												
HAMA, Median (IQR)	15.0 (12.8, 18.0)	9.5 (5.8, 14.0)	2.51	0.026	13.0 (10.5, 15.0)	6.5 (5.8, 8.3)	3.94	0.003	2.0 (1.0, 3.0)	2.0 (1.0,3.0)	-0.86	0.405
HAMD-17, Median (IQR)	25.5 (22.8, 29.0)	14.0 (10.0, 17.3)	7.35	<0.001	20.5 (16.9, 22.3)	10.0 (7.8, 11.0)	5.87	<0.001	1.0 (0.0, 2.0)	1.0 (1.0, 3.0)	1.38	0.189
PHQ-9, Median (IQR)	22.0 (18.5, 23.3)	13.5 (7.7, 19.3)	3.51	0.004	13.0 (10.8, 13.5)	4.0 (1.8, 7.0)	7.89	<0.001	2.0 (0.0, 3.0)	2.0 (1.0, 2.0)	0.32	0.758
MDQ, Median (IQR)	3.0 (2.0, 4.0)	2.0 (1.0, 3.0)	1.88	0.082	2.5 (1.8, 3.0)	2.0 (2.0, 2.0)	1.41	0.193	1.0 (0.0, 2.0)	2.0 (1.0, 2.0)	-1.24	0.235
PSQI, Median (IQR)	13.5 (11.0, 17.3)	11.5 (7.8, 12.8)	2.93	0.012	12.0 (6.8, 14.3)	8.5 (4.8, 11.8)	3.27	0.010	3.0 (2.0, 5.0)	3.0 (2.0, 5.0)	0.43	0.670
Features of peripheral body temperature												
<i>Mesor</i> , Mean (SD)	36.08 (0.31)	36.00 (0.35)	1.29	0.220	36.20 (0.29)	36.31 (0.29)	-1.55	0.156	35.92 (0.34)	36.02 (0.34)	-1.66	0.118
<i>Amplitude</i> , Mean (SD)	0.37 (0.15)	0.27 (0.17)	1.77	0.100	0.45 (0.25)	0.36 (0.17)	0.83	0.428	0.30 (0.16)	0.31 (0.15)	-0.11	0.916
<i>Phase-delay</i> , Mean (SD)	5.11 (3.44)	4.06 (1.93)	1.55	0.146	2.39 (2.14)	3.01 (2.09)	-0.86	0.412	3.45 (1.84)	2.82 (2.00)	-1.05	0.311
<i>Nadir</i> , Mean (SD)	4:50 (1:52)	7:23 (4:19)	1.92	0.077	5:05 (6:02)	6:11 (6:57)	-0.37	0.701	6:19 (4:36)	5:47 (5:28)	0.31	0.761

Abbreviation: MDD: Major depressive disorder; SD: standard deviation. IQR: interquartile range.

The clinical characteristics and temperature characteristics were analyzed by *Paired-samples T-test*, statistic value: *Z*; *P*: baseline vs. follow-up. The differences were determined with significance at 0.05 level and statistically significant results in the table were boldface.

Supplement Table 2. Association between peripheral body temperature and factor scores of HAMD-17 of MDD patients before and after treatment.

	Anxiety/ Somatoform		Weight		Cognitive impairment		Retardation		Insomnia		Total score	
Before treatment (N = 41)	R	P	R	P	R	P	R	R	R	P	R	P
Mesor	0.047	0.779	0.028	0.863	-0.075	0.649	0.347	0.03	0.163	0.321	0.16	0.329
Amplitude	-0.029	0.859	0.077	0.642	-0.028	0.867	-0.191	0.244	-0.346	0.031	0.203	0.215
Phase-delay	0.123	0.457	0.119	0.472	0.434	0.006	0.051	0.756	0.080	0.629	0.316	0.050
Nadir	0.070	0.670	-0.149	0.365	-0.064	0.701	0.068	0.682	-0.332	0.039	-0.086	0.601
After treatment (N = 24)	R	P	R	P	R	P	R	P	R	P	R	P
Mesor	0.100	0.657	-0.034	0.88	-0.181	0.420	-0.014	0.951	-0.237	0.289	-0.092	0.685
Amplitude	-0.151	0.502	-0.399	0.066	-0.182	0.417	-0.214	0.339	-0.250	0.263	-0.310	0.161
Phase-delay	-0.009	0.970	0.162	0.472	0.090	0.692	0.121	0.592	0.113	0.616	-0.114	0.613
Nadir	-0.221	0.323	-0.227	0.309	0.289	0.192	-0.082	0.718	-0.035	0.876	-0.072	0.749

Abbreviation: MDD: Major depressive disorder; NC: Normal control; R: correlation coefficient; P: P Value.
The association were analyzed by *Spearman* correlation *adjusted* by age and sex. The differences were determined with significance at 0.05 level and statistically significant results in the table were boldface.

Supplement Table 3. Peripheral temperature characteristic of female participants during different menstruation period before treatment.

Variables	Female MDD (N = 32)		Female NC (N = 12)		Z (P) ^a	Z (P) ^b	Z (P) ^c	Z (P) ^d
	Luteal phase (N = 14)	Follicular phase (N = 18)	Luteal phase (N = 5)	Follicular phase (N = 7)				
Mesor, Mean (SD)	36.38 (0.21)	36.11 (0.29)	36.03 (0.56)	35.75 (0.26)	-2.49 (0.011)	-1.54 (0.149)	-1.30 (0.219)	-2.33 (0.017)
Amplitude, Mean (SD)	0.30 (0.13)	0.44 (0.18)	0.32 (0.11)	0.34 (0.19)	1.88 (0.059)	-0.16 (0.876)	-0.28 (0.823)	-1.09 (0.297)
Phase-delay, Mean (SD)	4.11 (2.39)	3.52 (2.03)	2.80 (2.10)	3.44 (1.97)	-1.22 (0.235)	0.57 (0.639)	1.57 (0.156)	-0.06 (0.976)
Nadir, Mean (SD)	5:40 (3:24)	4:07 (2:57)	9:05 (4:10)	6:05 (7:09)	-1.71 (0.091)	-1.38 (0.202)	-1.48 (0.130)	0.36 (0.745)

Abbreviation: MDD: Major depressive disorder; NC: Normal control; SD: standard deviation.

The temperature characteristics were analyzed by *Mann-Whitney U*, statistic value: Z;

t/Z (P)^a: Luteal phase vs. Follicular phase in MDD; t/Z (P)^b: Luteal phase vs. Follicular phase in NC; t/Z (P)^c: MDD vs. NC during Luteal phase;

t/Z (P)^d: MDD vs. NC during Follicular phase. The differences were determined with significance at 0.05 level and statistically significant results in the table were boldface.

Supplement Table 4. Demographic characteristics and features of peripheral body temperature before treatment between MDD patients being followed-up and dropped-out.

Assessments	Followed up (N = 24)	Dropped out (N = 17)	χ^2/Z	P
Demographic characteristics				
Age (years), Mean (SD)	30.3 (4.8)	32.6 (8.0)	0.70	0.482
Height (cm), Mean (SD)	163.9 (6.8)	164.9 (3.8)	-1.11	0.267
Weight (kg), Mean (SD)	57.4 (11.1)	60.5 (11.2)	-0.92	0.353
BMI (kg/m ²), Mean (SD)	21.3 (3.6)	22.3 (3.5)	-0.98	0.327
Education (years), Median (Q1, Q3)	16 (15, 16)	16 (14, 16)	-0.43	0.667
Sex, Male, No. (%)	5 (20.0%)	4 (23.5%)	0.04	0.837
Clinical characteristics				
HAMA, Median (IQR)	14.5 (12.0, 17.3)	14.0 (12.0, 16.0)	-0.17	0.863
HAMD-17, Median (IQR)	23.0 (21.0, 26.0)	25.0 (19.3, 27.5)	-0.45	0.652
PHQ-9, Median (IQR)	17.0 (13.0, 23.0)	18.0 (16.0, 22.0)	-0.85	0.396
MDQ, Median (IQR)	3.0 (2.0, 3.0)	3.0 (1.5, 4.0)	-0.10	0.924
PSQI, Median (IQR)	12.0 (10.3, 16.5)	13.0 (12.0, 15.5)	-0.48	0.632
Features of peripheral body temperature				
Mesor, Mean (SD)	36.13 (0.30)	36.29 (0.25)	-1.83	0.068
Amplitude, Mean (SD)	0.41 (0.20)	0.35 (0.10)	-1.32	0.186
Phase-delay, Mean (SD)	3.98 (2.20)	3.89 (1.98)	0.13	0.895
Nadir, Mean (SD)	04:56 (04:02)	05:19 (3:30)	-0.40	0.691

Abbreviation: MDD: Major depressive disorder; NC: Normal control; SD: standard deviation.

IQR: interquartile range.

Sex was calculated by *Chi-square test*, statistic value: χ^2 ; Others were calculated by *Mann-Whitney U*, statistic value: Z; P: Followed-up vs. Dropped out. The differences were determined with significance at 0.05 level and statistically significant results in the table were boldface.