Supplementary Materials

Table S1 reports the values of the JND and JND^{95} of each participant for both the congruent and incongruent conditions. In bold are underlined those participants who behaved contrary to what was expected by the hue-heat hypothesis (i.e., their incongruent JNDs are smaller than the congruent ones).

Subject	JND congruent	JND^{95} congruent	JND incongruent	JND^{95} incongruent
1	0.64	1.56	1.04	2.53
2	0.46	1.12	0.68	1.66
3	**0.66**	**1.60**	**0.49**	**1.19**
4	0.79	1.93	1.99	4.86
5	**0.59**	**1.45**	**0.48**	**1.17**
6	0.55	1.33	0.74	1.80
7	0.35	0.85	0.40	0.98
8	0.34	0.82	0.48	1.17
9	**0.78**	**1.90**	**0.68**	**1.65**
10	**0.38**	**0.93**	**0.35**	**0.84**
11	0.51	1.24	0.79	1.93
12	0.33	0.81	0.53	1.30
13	0.40	0.99	0.55	1.33
14	**0.83**	**2.04**	**0.23**	**0.57**
15	0.44	1.07	1.82	4.43
16	0.36	0.88	0.69	1.69
17	0.36	0.89	0.48	1.17
18	**0.61**	**1.49**	**0.53**	**1.30**
19	0.49	1.18	0.51	1.24
20	0.28	0.69	0.66	1.61
21	0.50	1.22	1.11	2.71
22	**0.42**	**1.01**	**0.33**	**0.80**
23	**0.55**	**1.35**	**0.32**	**0.77**
24	**0.63**	**1.52**	**0.54**	**1.31**
25	0.25	0.62	0.35	0.85
26	**0.74**	**1.81**	**0.55**	**1.33**

Table S1: JND and JND95 of each participant in the congruent and incongruent condition

Comparison of the demographical information of the two groups of participants

Tables S2 and S3 report the demographical information of the two groups of participants: the one who behaved as expected by the hue-heat hypothesis and the one who behaved opposite to it.

16 participants	Age	Sex	BMI	Temperature preferences	EQ	BPQ_BOA	BPQ_ASR	GPAQ_m	GPAQ_i
characterisation	max 63; min 23	50% females	max 24.22; min 18.59	3 prefer warm, 8 no preferences, 5 prefer cold	2 subj. < cut-off	6 subj. < cut-off	2 subj. > cut-off	0 subj. < cut-off	7 subj. < cut-off
Average	35	/	22.06	/	41.88	20.25	13.88	503	149
St. deviation	13	/	1.68	/	8.38	6.08	1.82	411	162

Table S2: demographic information of participants (n = 16) belonging to the group who behaved as expected
EQ = Emphatic Quotient (cut-off < 33); BPQ_BOA = Body Perception Questionnaire_Body Awareness (cut-off < 18); BPQ_ASR = Body Perception Questionnaire_Autonomous System Stress Response (cut-off > 16); GPAQ_m = Global Activity Questionnaire_moderate level of activity (cut-off < 150 minutes); GPAQ_i = Global Activity Questionnaire_intense level of activity (cut-off < 75 minutes).

10 participants	Age	Sex	BMI	Temperature preferences	EQ	BPQ_BOA	BPQ_ASR	GPAQ_m	GPAQ_i
characterisation	max 46; min 24	50% females	max 27.89; min 18.67	2 prefer warm, 4 no preferences, 4 prefer cold	2 subj. < cut-off	3 subj. < cut-off	3 subj. > cut-off	3 subj. < cut-off	1 subj. < cut-off
Average	33	/	21.42	/	41.40	19.50	15.60	438	214
St. deviation	8	/	2.86	/	11.22	5.89	3.47	355	169

Table S3: demographic information of participants (n = 16) belonging to the group who behaved contrary to what was expected
EQ = Emphatic Quotient (cut-off < 33); BPQ_BOA = Body Perception Questionnaire_Body Awareness (cut-off < 18); BPQ_ASR = Body Perception Questionnaire_Autonomous System Stress Response (cut-off > 16); GPAQ_m = Global Activity Questionnaire_moderate level of activity (cut-off < 150 minutes); GPAQ_i = Global Activity Questionnaire_intense level of activity (cut-off < 75 minutes).

We further analysed the presence of possible differences between the two groups by means of a t-test (when the data was normally distributed, i.e., for the variable BMI) or a Wilcoxon test (when the data was not normally distributed, i.e., for the variable Age, EQ, BPQ_BOA, BPQ_ASR, GPAQ_m, GPAQ_i). The statistical tests never showed a significant difference in these variables between the two groups (see Table S4), further demonstrating that the differences in their behaviour cannot be explained by demographic differences.

Variable	Type of test	p-value
Age	Wilcoxon test	0.98
BMI	t-test	0.53
EQ	Wilcoxon test	0.89
BPQ_BOA	Wilcoxon test	0.92
BPQ_ASR	Wilcoxon test	0.24
GPAQ_m	Wilcoxon test	0.60
GPAQ_i	Wilcoxon test	0.59

Table S4: statistical comparison between the demographical information of the two groups
EQ = Emphatic Quotient; BPQ_BOA = Body Perception Questionnaire_Body Awareness; BPQ_ASR = Body Perception Questionnaire_Autonomous System Stress Response; GPAQ_m = Global Activity Questionnaire_moderate level of activity; GPAQ_i = Global Activity Questionnaire_intense level of activity.

The temperature present in the airlock averaged for all 26 participants was 21.45 °C ± 0.57 °C. Figure S1 shows the variations in the airlock temperature during the experiment for three participants.

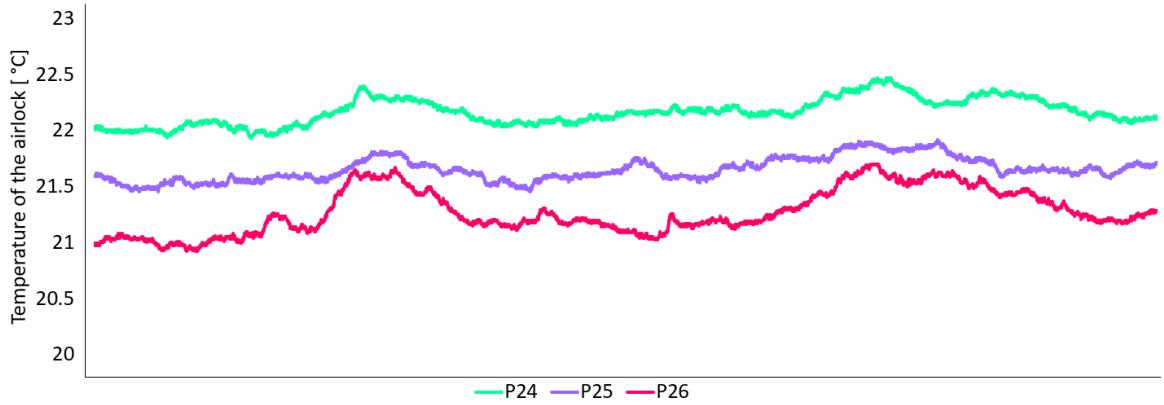

Figure S1: temperature variations in the airlock temperature during the experiment for three participants