Hart J, Omolo B, Boone R. Thermal patterns and health perception. JCCA. 2007; 51(2):106–111.

In the paper *Thermal patterns and health perception*,¹ an analysis error occurred. Briefly, our study involved 68 subjects, each of whom had 3 consecutive thermal scans at weekly intervals. At each visit, readings from each side of the spine (left and right channels), and the difference between sides (delta channel) were obtained. Thermal pattern percents were estimated by comparing Visits 1 and 2 (PP1), and Visits 2 and 3 (PP2). Participants also completed the SF-12 survey on each visit, from which physical and mental component summaries (PCS and MCS) were derived as outcomes.

In our original analysis, the data were organized so that subjects' PP1 readings were aligned with their outcome scores from Visit 2 while their PP2 readings were aligned with their outcome scores from Visit 3. However, we erred by analyzing the 68 "paired" (PP1 and PP2) scores as if they had been originated from 136 independent subjects. We also dichotomized the PP scores, then compared outcomes between "high" and "low" groups, again without recognizing the "within-subjects" pairing of the data.

The Correction here is based on converting paired observations to independent summary scores. We used the average of the 2 thermal pattern percents (PP1 and PP2) for each channel and the average of the Visit 2 and Visit 3 outcome scores for each participant. We then estimated the correlation between average thermal pattern percent and average (of 2 separately-timed) PCS and MCS scores. This way, all analyses were correctly based on only 68 independent observations.

In pattern theory, increased thermal pattern percent is considered unhealthy and indicative of a nervous system with diminished adaptive capabilities. For the outcome variables, PCS and MCS, higher scores signify better health. A total of 6 Pearson correlations were estimated (between pattern percent and each of 2 outcomes, for each of 3 thermal channels). As one outcome variable (MCS) lacked a normal distribution, a nonparametric statistic was used (Spearman test).

We found no correlation between average pattern percentages and PCS measurements (all Pearson r values < 0.100; all 2-tailed P values > 0.45). We found weak, but near-significant, inverse correlations between average pattern percentages and MCS scores: left channel Spearman's rho (r_s) = -0.206 (95% CI: -0.422 to 0.036, P = 0.09); delta channel r_s = -0.218 (95% CI: -0.433 to 0.023, P = 0.07); and right channel r_s = -0.206 (95% CI: -0.423 to 0.035, P = 0.09).

Contrary to our original analysis,¹ these results show that pattern percentages are not correlated with health status as assessed by the SF-12 PCS. Similar to our original analysis, we found nearly significant correlations of otherwise trivial magnitude between higher pattern percentages (poorer health status according to pattern theory) and poorer mental health status as assessed by the SF-12 MCS. Specifically, all estimated correlations between pattern percentage and MCS score were approximately 0.2, conventionally meaning weak to negligible correlation. Upon examining the 95% confidence intervals for r_s , the most extreme value was -0.43 (lower bound for delta channel), indicating that, at best, a weak-to-moderate correlation was compatible with the data.

The lead author (JH) apologizes for his error. Both authors appreciate the opportunity to provide a correction here, and wish to acknowledge our third author, Dr. Ralph Boone, who recently passed away.

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Reference

1 Hart J, Omolo B, Boone R. Thermal patterns and health perception. JCCA. 2007; 51(2):106–111.