

# Review of: "The Influence of Perceived Spiciness on Actual Taste Experience: An Experimental Study"

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**Potential competing interests:** No potential competing interests to declare.

This paper evaluating the influence of expectation versus perception begins to address the question of how influential is the power of suggestion. As noted by other reviewers this study has several limitations, which I will also summarize below, however it also provides some insights that may be useful as pilot data for future investigations.

## Comments:

1. While N=10 is insufficient for a definitive study, it may be useful as a pilot study to generate effects sizes for future study design. For example, the effect size of 30% over and 10% under estimates could be used to determine sample size calculations for a larger study.
2. It is unclear that 0.1 mg increases of capsaicin correspond to a linear change in "spiciness." It would be helpful to have a sample without influence or expectation sample each in a random order and identify what the natural relationship may be. For example, heat pain studies have shown the intensity – pain curve to be nonlinear. If that is also true for spiciness, then the average difference reported may need to be re-evaluated based on a nonlinear model.
3. At what point can "spiciness" no longer be differentiated (i.e., based on individual tolerance) such that everything beyond some threshold may be perceived somewhat equally as intolerably spicy? Looking at the figures (thank you for providing individual subject data!) it would seem that the largest effects occur at the highest levels of spiciness. Might this then be more prone to influence if actual spiciness can no longer be reliably differentiated? Limiting each person's exposures to a degree that they deem tolerable may help with this issue (but then also add new problems of an unbalanced design).