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REPLY TO LETTER TO THE EDITOR

Response to Letter to the Editor regarding “Olfactory influences on mood and autonomic, endocrine, and immune function”

Dear Editor,

We appreciated your request to respond to the critique about our recent olfactory study (Kiecolt-Glaser et al., 2008) from Kamyar M. Hedayat, MD, FAAP (Attending, Center for Complementary Medicine, Attending, Division of Critical Care, Department of Pediatrics, Advocate Lutheran Children’s Hospital, Chicago, IL, President and Chief Medical Officer, Aroma MD, LLC) and Michael Tsifansky, MD (Attending and Director of Research, Division of Critical Care, Department of Pediatrics, Advocate Lutheran Children’s Hospital, Chicago, IL).

We can understand how the critique’s first author, the president of a medical aromatherapy company, would certainly have preferred seeing more positive findings from a study such as ours.

The critique suggested that we had not cited a number of clinical trials that supported the efficacy of essential oils in humans by inhalation or enteral administration. Unfortunately, empirical reports cannot exhaustively review literature and remain within the journal’s space constraints. Enteral use was well beyond the scope of our report, as was an exhaustive review of odors we had not used, leaving only one relevant positive paper in the list of references they provided, the report by Atsumi and Tonsaki.

We were also faulted for not including our gas chromatography or mass spectrometry (GC/MS) data. We would have been happy to provide the data had the editor or reviewers requested it, but our article already included 7 figures. In fact, the careful characterization of essential oils by such means is the clear exception, rather than the rule in this literature (and, indeed, notably absent in the reports cited by Hedayat and Tsifansky).

Hedayat and Tsifansky suggested that our choice of essential oils was based on a single book by two aromatherapists with no formal medical training; however, as we had noted in the final paragraph of our paper, we chose lemon and lavender precisely because they are widely used purported stimulant and relaxant odors, and health benefits have been repeatedly ascribed to them, particularly lavender. They note that lavender’s record for pain control is even worse than we described, and they cite additional studies that

provide further negative data related to lavender’s effects on pain and physiological changes (in accord with our data); we stand by our assertion that lavender is touted as an analgesic in aromatherapy publications.

We appreciate the fact that these authors identified an error in our Methods section. Lemon (Citron limon) essential oil was indeed obtained by mechanical compression, not steam distillation.

Arguing that exposing subjects to essential oils over a period of hours leads to receptor desensitization, Hedayat and Tsifansky said that positive clinical findings are found with no more than 20 min of exposure. This is an interesting point, but the physiological changes following initial odor administration in our protocol were nonsignificant, just as they were throughout the later portions of the sessions. These authors further suggest that the time period of exposure could have led simultaneously to irritation, but this is not consistent with the pattern of positive mood increases we reported with lemon oil, nor with the similar pattern of mood changes reported between water and lavender oil. Finally, as we noted in our paper, the same odor is used over a period of several hours in most clinical applications of aromatherapy, and thus our paradigm provided relevant data on results that might be expected from typical aromatherapy practices.

In sum, although we appreciate the comments by Hedayat and Tsifansky, we must disagree with their conclusions.

Reference

Kiecolt-Glaser, J.K., Graham, J.E., Malarkey, W.B., Porter, K., Lemeshow, S., Glaser, R., 2008. Olfactory influences on mood and autonomic, endocrine, and immune function. *Psychoneuroendocrinology* 33 (April (3)), 328–339.

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