

Bright light intensifies initial emotional reaction to stimulus

February 20 2014, by Don Campbell

(Medical Xpress)—The next time you want to turn down the emotional intensity before making an important decision, you may want to dim the lights first.

A new study from the University of Toronto Scarborough shows that [human emotion](#), whether positive or negative, is felt more intensely under [bright light](#). Alison Jing Xu, assistant professor of management at UTSC and the Rotman School of Management, along with Aparna Labroo of Northwestern University, conducted a series of studies to examine the unusual paradox of lighting and human emotion.

"Other evidence shows that on sunny days people are more optimistic about the stock market, report higher wellbeing and are more helpful while extended exposure to dark, gloomy days can result in [seasonal affective disorder](#)," says Xu. "Contrary to these results, we found that on sunny days depression-prone people actually become more depressed," she says, pointing to peaks in suicide rates during late spring and summer when sunshine is abundant.

Xu and Labroo asked participants to rate a wide range of things—the spiciness of chicken-wing sauce, the aggressiveness of a [fictional character](#), how attractive someone was, their feelings about specific words, and the taste of two juices—under different lighting conditions.

The results: under bright lights emotions are felt more intensely. In the brighter room participants wanted spicier chicken wing sauce, thought

the fictional character was more aggressive, found the women more attractive, felt better about positive words and worse about negative words, and drank more of the "favourable" juice and less of the "unfavourable" juice.

Xu says the effect bright light has on our emotional system may be the result of it being perceived as heat, and the perception of heat can trigger our emotions. "Bright light intensifies the initial emotional reaction we have to different kinds of stimulus including products and people," she says.

The majority of everyday decisions are also made under bright light. So turning down the light may help you make more rational decisions or even settle negotiations more easily.

"Marketers may also adjust the lightening levels in the retail environment, according to the nature of the products on sale," says Xu. "If you are selling emotional expressive products such as flowers or engagement rings it would make sense to make the store as bright as possible."

Xu notes the effect is likely to be stronger on brighter days around noon when sunlight is the most abundant and in geographic regions that experience sunnier rather than cloudier days.

The research is published in the current edition of the *Journal of Consumer Psychology*.

More information: Alison Jing Xu, Aparna A. Labroo, "Incandescent affect: Turning on the hot emotional system with bright light," *Journal of Consumer Psychology*, Available online 31 December 2013, ISSN 1057-7408, [dx.doi.org/10.1016/j.jcps.2013.12.007](https://doi.org/10.1016/j.jcps.2013.12.007).

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