Body and Mind: How Mindfulness Enhances Consumers' Responsiveness to Physiological Cues in Food Consumption

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External cues regularly override physiological cues in food consumption, also characterized as mindless eating. We propose that mindfulness, an enhanced attention to the present moment, improves consumers’ responsiveness to physiological cues. We demonstrate this for dispositional mindfulness and a short training of mindfulness that focuses attention on the body.

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EXTENDED ABSTRACT

External cues in the eating environment regularly override physiological hunger and satiety cues, which has led scholars to characterize eating as mindless (Wansink 2004). Whereas it is well known that consumers often fail to attend to physiological cues in their eating behaviour, it is not known whether potential remedies exist to help consumers be more responsive to these cues. The current study demonstrates that mindfulness, a state of ‘heightened awareness of what is going on at the present moment’ (Brown and Ryan 2003) improves consumers’ responsiveness to physiological cues. We demonstrate this for mindfulness as a trait as well as for state induced mindfulness, and show that even a short mindfulness training is powerful enough to affect consumers’ responsiveness to hunger and satiety cues. Finally, the object of attention matters: Only mindful attention to the body helps consumers to rely on these cues.

The body’s feedback system affects not only within-meal consumption but also, and perhaps more importantly, when and how much to eat at a later point in time. This is important because being able to compensate for previous consumption appears to be a critical determinant of maintaining a stable body weight (Corin et al 2004). Compensation ability is generally impaired when consumers are distracted (Higgs and Woodward, 2006; Mittal et al in press). Consumers may also chronically be more or less responsive to physiological cues. Restrained eating, a form of constant but often unsuccessful dieting, has frequently been associated with a failure to compensate for previous consumption (Herman and Mack 1975) Constant dieting has apparently taught them to ignore bodily sensations (Heatherton, Polivy and Herman 1989). In contrast, people who regularly exercise appear better at compensating for previous consumption (Long, Hart and Morgan 2002). Combining these findings gives an indication that attention, and in particular attention to the body, plays an important role in responsiveness to hunger and satiety cues.

Mindfulness is defined as an ‘enhanced attention to what is going on at the present moment’ (Brown and Ryan 2003) Mindfulness has been related to beneficial psychological health outcomes, mostly within clinical contexts and longer-term interventions. We propose that mindfulness’ ability to foster a mental state of focused attention is relevant for responsiveness to physiological cues. Mindfulness trainings vary in whether they teach individuals to focus attention on bodily sensations, stimuli in the environment or on both simultaneously (Bishop et al. 2004). In the current study we therefore also examine whether the object of mindful attention matters. Can mindful attention per se increase responsiveness to hunger cues, or does it matter where this attention is directed?

In Experiment 1 we assessed the effects of chronic mindfulness assessed by the MAAS (Brown and Ryan, 2003) on compensation for previous food consumption. Participants consumed either a high caloric or a low caloric milkshake. In a second part of the experiment, participants evaluated neutral video fragments with a bowl of M&M’s placed next to their screens. The amount of M&Ms consumed constituted the dependent variable. The results show that, the interaction between caloric content of the milkshake and dispositional mindfulness significantly predicted consumption amount. More specifically, high mindful participants ate fewer M&Ms when they had previously consumed a high caloric milkshake, than when they had previously consumed a low caloric milkshake. For low mindful participants, the effect of the caloric content of the milkshake did not affect later consumption.

Experiment 2 assessed whether a mental state of mindfulness can be elicited through short audio fragments of mindfulness instructions. Participants listened to a short mindfulness instruction (around four minutes) recorded by a yoga teacher. These instructions focused either on the body or on the environment. In the control condition, participants listened to a recorded story. Results demonstrated that both mindfulness instructions elicited similar levels of state mindfulness, but with foci of attention on the body and environment, respectively.

In Experiment 3, we tested the effects of these same mindfulness manipulations on individuals’ capability to compensate for previous consumption. Participants listened to one of the mindfulness instructions conditions. They then consumed either a small Snickers or a large Snickers. In a second part of the experiment, participants evaluated cookies. At the end of the experiment, participants’ cookie consumption was assessed. In line with our expectations, there was a significant interaction between portion size and mindfulness. Only in the attention to body condition did portion size have an effect on cookie consumption, such that participants who had been served a large chocolate bar ate fewer cookies than participants who been served a small chocolate bar.

Together, these experiments show that mindfulness improves an consumers’ responsiveness to internal cues in food consumption. Furthermore, these results indicate that it matters where this attention is directed, as only mindful attention to the body produced these results. Our findings are in line with findings that have shown that distraction undermines compensation behaviour, namely we have shown that the opposite side of the coin, an enhanced state of attention, can improve compensation behaviour. Our findings add to the mindfulness literature in that, until now, the concept of mindfulness has mostly been applied in clinical contexts. For mindfulness research in general, it may be worthwhile to distinguish between the object of attention in different mindfulness trainings, as our findings suggest these have different effects.

On a practical level, our study shows that consumers can enhance their responsiveness to hunger and satiety cues, an important determinant of a constant body weight. Our findings give consumers more guidance on how responsiveness to hunger and satiety cues can be achieved. Simply focusing on several general and more accessible aspects of the body, such as breathing and posture, can improve eating patterns.

REFERENCES


Center for Mindfulness and Justice, http://www.mindfulnessandjustice.org


