



# Watching how you eat! Mindfulness and disinhibited eating

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## Introduction

### Self-awareness and Eating

Consistent self-monitoring of eating behaviour "despite competing internal and external demands seems particularly critical" to the control of weight in the long-term [2]. Attempting to lose weight by reducing energy intake paradoxically increases the probability of dietary lapses or overeating, broadly referred to as disinhibited eating [9]. Individuals who are prone to disinhibited eating have decreased awareness of their level of satiety [5, 7]. Both Escape Theory [6] and the Limited Capacity Model [3] suggest that disinhibited eating is more likely to occur when self-awareness is attenuated by upsetting or distracting events. Research that manipulated self-awareness in an eating situation clearly indicated that increasing self-focused awareness during eating limits the amount of food individuals will consume [10].

### Mindfulness & Self-awareness

Mindfulness has been described as attention to and awareness of present events and experience [4] and as a way of paying attention by focusing non-judgementally on particular stimuli [1].

Although not identical to self-awareness, both concepts imply heightened attention and awareness, including bodily sensations. Self-awareness and mindfulness differ with respect to the quality of attention/awareness that is deployed. Self-awareness can be understood as reflexive awareness, concerned with self-regulation and control, and the preservation or enhancement of identity, whereas mindfulness implies a curious and detached observing of emotions and sensations, not primarily concerned with regulation and control [4].

### Mindfulness & Eating Behaviour

By increasing awareness of physiological signals and keeping an emotional distance to them through mindfulness training individuals may respond better to normal satiety cues and thus regulate their energy intake more effectively. Furthermore, as mindfulness-based techniques (MBTs) promote self-acceptance and reduce reactivity to aversive emotions such techniques should reduce the likelihood of disinhibited eating that is typically triggered by aversive emotions [6]. Evidence for the effectiveness of MBTs to aid energy regulation or limit disinhibited eating is sparse. Three studies have shown that use of MBTs reduces the frequency and severity of binge eating in overweight women prone to binge eating [1, 8, 11]. We are not aware of any studies that have found a link between mindfulness and measures of disinhibited eating such as the Three-Factor Eating Questionnaire (TEFQ-R21; [12]).

### Our study

The current study examined the potential association between mindfulness and disinhibited eating as a precursor to experimental investigations of the effectiveness of a mindfulness-based intervention for weight control. We predicted that a greater likelihood of disinhibited eating would be related to lower scores on a measure of mindfulness, independent of mood.

## Methods

### Participants & Procedure

187 undergraduate students:

- 30 male
- 157 female
- mean age 21 (± 5.6) years

Participants filled an online questionnaire in return for credit to be used within an online research participant recruitment scheme.

### Measures

**Eating behaviour:** Revised Three-Factor Eating Questionnaire (TEFQ-R21, [12]) 21 items, 3 sub-scales (cognitive restraint, emotional eating, uncontrolled eating)

**Mindfulness:** Shortened version of Kentucky Inventory of Mindfulness Skills (s-KIMS, Malinowski, unpublished) 21 items, 3 sub-scales (acting with awareness, observing, accepting without judgement)

**Mood:** Hospital Anxiety and Depression Scale (HADS; [13]) 14 items, 2 sub-scales (anxiety, depression)

## Results

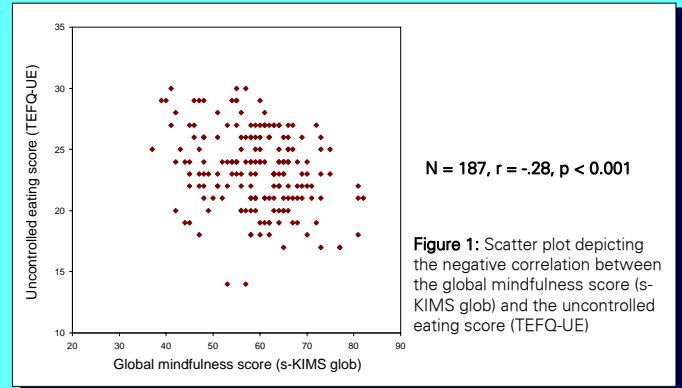


Figure 1: Scatter plot depicting the negative correlation between the global mindfulness score (s-KIMS glob) and the uncontrolled eating score (TEFQ-UE)

Pearson correlations were computed between all measures. The TEFQ uncontrolled eating subscale (TEFQ-UE) was significantly negatively correlated with the global score on the KIMS ( $r = -.28$ ) and the HADS anxiety subscale (HADS-A;  $r = -.28$ ). Partial correlations indicated that whilst controlling for HADS-A the relationship between the TEFQ-UE and the global KIMS measure remained significant ( $r = -.16$ ).

	Uncontrolled eating	Emotional eating	Global mindfulness	Anxiety
Emotional eating	.398**			
Global mindfulness	-.278**	-.194**		
Anxiety	-.276**	-.280**	.524**	
Depression	-.081	-.168*	.344**	.548**

Table 1: The main significant correlations in this study \*  $p < 0.05$ ; \*\*  $p < 0.01$

## Discussion

These results suggest that mindfulness correlates with disinhibited eating patterns in a manner predicted by the Escape Theory of disinhibited eating [6] and the Limited Capacity Model [3]. Experimental studies are warranted to examine the potential causal relationship between mindfulness and eating behaviour.

Here we measured self-reported, naturally occurring mindfulness. If a causal relationship between mindfulness and disinhibited eating patterns can be established, mindfulness-based interventions that aim at improving or cultivating mindfulness may be promising in tackling disinhibited eating and supporting weight control. Future studies shall evaluate the effectiveness of such an approach.

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