



# Five facets of mindfulness and their associations with disordered eating behaviors among Japanese college samples :Implications for treatment of eating related problems

Naoki MAMPUKU<sup>1)</sup> Takashi MUTO<sup>2)</sup>

1) Graduate School of Psychology, Doshisha University 2) Department of Psychology, Doshisha University

Contact  
kizugawa.clean@gmail.com

## Purpose

Many studies have examined the efficacy of mindfulness-based interventions (MBIs) in the treatment of disordered eating. Katterman et al. (2014) have showed that MBIs reduced emotional eating and external eating, but some studies have indicated that MBIs increased restrained eating (e.g., Dalen et al. (2010)). Kristeller and Hallett (1999) have suggested that MBIs reduced disordered eating by promoting awareness satiety cues (e.g., stomach sensations). However, no study investigated disordered eating and it's associations with mindfulness and awareness of satiety cues. The present study explored two relationships. **(R1): Mindfulness is associated with less emotional and external eating and with more restrained eating. (R2): Awareness of satiety cues is related to less disordered eating.**

## Method

**Participants:** 243 undergraduate students (96males, 147females) participated in online surveys.

**Measures:** (Dep) The Dutch Eating Behavior Questionnaire (DEBQ): Assesses disordered eating (emotional, external, restrained)  
 (Ind1) Five Facet of Mindfulness Questionnaire (FFMQ): Awareness, observing, nonjudging, nonreacting, describing  
 (Ind2) Stomach Sensation Awareness (SSA): Measures how aware individuals are of stomach sensations while eating.  
 (Ind3) Body Mass Index(BMI): Weight(kg) / height(m)<sup>2</sup>

**Analysis:** A multiple regression analysis was performed with DEBQ subscales as dependent variables.

## Results

Table1. Results of the multiple regression analysis

	DEBQ Emotional ( $\alpha=.94$ )		DEBQ External ( $\alpha=.85$ )		DEBQ Restrained ( $\alpha=.88$ )		VIF
	$\beta$	$p$	$\beta$	$p$	$\beta$	$p$	
Age	.072	.255	-.071	.275	-.038	.516	1.062
Gender (female)	.198	.002 **	.122	.068	.235	< .001 ***	1.124
BMI	.164	.010 *	.016	.808	.284	< .001 ***	1.078
Awareness ( $\alpha = .83$ )	-.141	.036 *	-.004	.949	.157	.013 *	1.218
Observing ( $\alpha = .72$ )	.068	.327	.091	.206	.113	.085	1.309
Nonjudging ( $\alpha = .85$ )	-.090	.211	-.153	.039 *	-.054	.425	1.387
Nonreacting ( $\alpha = .73$ )	-.148	.029 *	-.080	.252	-.107	.093	1.232
Describing ( $\alpha = .86$ )	-.031	.636	-.004	.948	.035	.573	1.157
SSA ( $\alpha = .93$ )	-.043	.502	.038	.567	.186	.002 **	1.086
$R^2$	.14		.08		.24		

Note) \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ , DEBQ = Dutch Eating Behavior Questionnaire; BMI = Body Mass Index; SSA = Stomach Sensation Awareness

## Conclusion

1. Facets of mindfulness were associated with less emotional and external and with more restrained eating. **(R1) was confirmed.**
2. SSA scores were associated with more restrained eating. **(R2) was not confirmed.**
3. The results indicated that MBIs were effective in reducing emotional and external eating, but may increase restrained eating. In addition, awareness of stomach sensations was related to more restraint eating. These results suggest that **MBIs need to incorporate components reduce restrained eating** (e.g., Appetite Awareness Training (Craighead et al., 1995) )

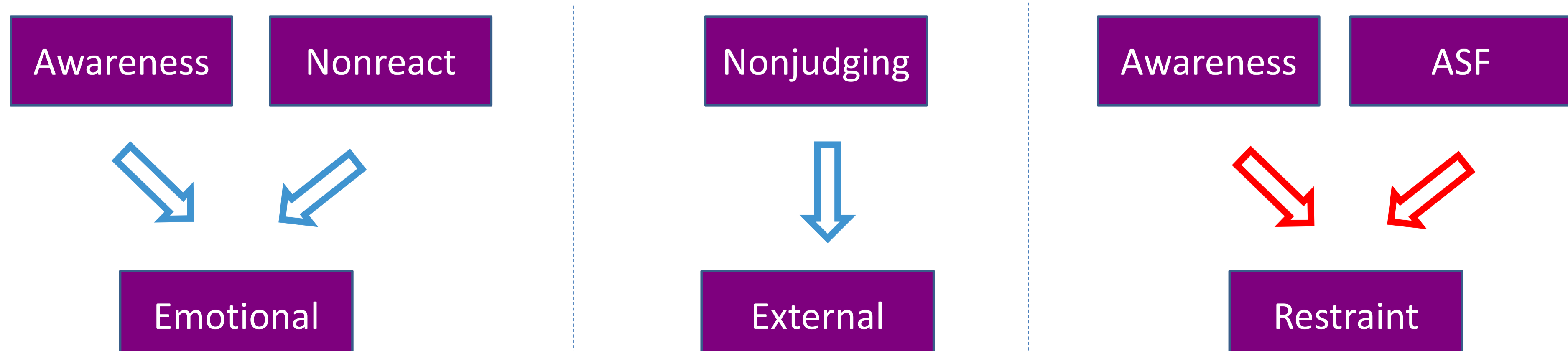


Figure1. Associations indicated by the multiple regression analysis