

**How does mindful eating *without non-judgement*, mindfulness, and self-compassion relate to motivations to eat palatable foods in a student population?**

*Nutrition and Health*

**How does mindful eating *without non-judgement*, mindfulness, and self-compassion relate to motivations to eat palatable foods in a student population?**

**Abstract**

**Background:** Previous research acknowledges the impact mindfulness, mindful eating and self-compassion has upon weight regulation and motives to eat palatable foods; with mindful eating showing an increased impact of eating behaviours. Some research has identified that present moment awareness should be the primary focus of mindful eating.

**Aim:** This research aimed to explore the relationship between mindfulness, self-compassion, and mindful eating with motivations to eat palatable food.

**Methods:** A cross-sectional study was conducted to investigate this relationship amongst university students ( $n=211$ ), utilizing a newly developed mindful eating scale primarily focusing on present moment awareness.

**Results:** Results indicated significant negative correlations between both self-compassion and mindful eating and motives to eat palatable foods. Mindful eating positively correlated with self-compassion and other mindfulness elements that are suggesting indirect acceptance measurements of the mindful eating scale.

**Conclusion:** Possible explanations and future directions are discussed further with an emphasis on the need for more empirical work. In addition, suggestions are provided regarding the reinterpretation of elements that are investigated and explored in eating literature.

**Key words:** Mindfulness; Mindful Eating; Self-Compassion; Motivations to eat palatable foods; Obesity

## Introduction

Obesity is considered in England and globally a major issue of concern, which is associated with a number of chronic conditions, physical and psychological implications, and increased healthcare costs (Lean, 2018). Estimates propose that 29% of adults in England are classified as obese (NHS, 2019), with the World Health Organization highlighting the need for obesity prevention (WHO, 2004). While the World Health Organization (2003) recommended that a primary goal for the prevention of eating related chronic diseases should be a reduction in the consumption of energy-dense foods, the typical diets in developed countries are characterised by energy-dense, high in saturated fat and/or sugar foods (Drewnowski & Popkin, 1997; Hu et al., 2000; Popkin, 2006), with potential motivators to consume those foods being largely unexplored.

University students are an ideal population in which to explore such motivations, particularly during their first year at University which is an “at risk” period for body weight gain (Brown, 2008; Sprake et al., 2017; Tanton, Dodd, Woodfield et al., 2015). Transition to university is typically the first time an individual will have lived away from home and consequently had the responsibility of preparing their own food, with one of the most common barriers to healthy eating being the accessibility of unhealthy palatable foods (Ashton, Hutchesson, Rollo et al., 2016; McMorrow, Ludbrook, Macdiarmid et al., 2017).

The consumption of palatable foods with non-hunger driven motivations include coping, reward enhancement, social motivations and conformity (Burgess, Turan, Lokken et al., 2014). The consumption of palatable foods due to coping (Boggiano et al., 2014; Burgess et al., 2014) and conformity motivations (Mantzios, Egan, Keyte et al., 2018) is associated with a higher BMI in student populations; with coping, reward enhancement, social and conformity motivations being associated with eating behaviours such as grazing (Mantzios et al., 2018a). Understanding the motives for eating palatable foods will inform the development of interventions for obesity.

Accordingly, Mantzios and Egan (2018) suggested that mindfulness, mindful eating and self-compassion enable and assist weight regulation through negative associations to motives to eat palatable foods, and implications for potential interventions to regulate food consumption.

**The practice of mindfulness is defined as an awareness that emerges through purposefully paying**

attention in the present moment, non-judgmentally (Kabat-Zinn, 1990), with research acknowledging that being mindfully aware of food is helpful in regulating cravings and eating (e.g., Alberts, Mulkens, Smeets et al., 2010; Mantzios & Wilson, 2014, 2015a). Dutt et al (2019) suggested that mindfulness meditation within a student population can promote healthy eating behaviours, with recent interventions identifying self-compassion as a construct within mindfulness, which enables greater weight regulation. Self-compassion is described to be a kinder approach to oneself, with a mindful awareness and understanding on one's experiences (Neff, 2003a, 2003b). With mindfulness and self-compassion appearing to complement each other resulting in better health outcomes (Mantzios & Wilson, 2015a), it follows that research now aims to investigate eating behaviours and how well they conform to health outcomes.

**Mindful eating is the application of mindfulness fundamentals on food-related experiences; that is, purposeful attention to the present meal with a non-judgmental or accepting attitude.** Mindful eating assists in the gradual change of external to internal motives to eat, and promotes healthier eating behaviours (Mantzios & Wilson, 2014, 2015a, b; Mantzios & Giannou, 2014), such as an increased intake of fruit and vegetables (Jordan, Wang, Donatoni et al., 2015; Gilbert & Waltz, 2010), as well as a reduction in the consumption of high sugar and energy-dense foods (Mason et al., 2016). Research has found a negative association between mindful eating and fat and sugar consumption (Mantzios, Egan, Hussein et al., 2018b), grazing (Mantzios, Egan, Bahia et al., 2018c), weight gain (Mantzios, Wilson, Linnell et al., 2015), and motivations to eat palatable foods (Mantzios & Egan, 2018).

Whilst previous research acknowledges the impact of mindfulness, mindful eating and self-compassion upon weight regulation and motives to eat palatable foods, it is the potential of mindful eating (over and above traits of mindfulness and self-compassion), that shows an increased impact of eating behaviours. Mindful eating has explored both present moment awareness and non-judgment, while some authors have highlighted that the present moment awareness should be the primary focus (Tapper, 2018 as cited in Winkens et al., 2018). Therefore, we utilized a newly developed scale that is primarily focusing on present moment awareness, and investigated the impact upon motives to eating palatable foods amongst University students. We hypothesized that mindfulness, self-compassion and especially mindful eating would relate to motivations to eat palatable foods. Prior to investigating our main

hypothesis, we explored the mindful eating scale and inter-relatedness of subscales (to use the overall scale score), and also explored the scale against a trait mindfulness scale, with the intention of exploring whether and how sub-constructs relate when expectations would be that they display some significant association, with the attentional, awareness and non-judgment (or acceptance) aspects of trait mindfulness.

## **Methods**

### *Participants*

Two-hundred and eleven undergraduate students were recruited from a West Midlands University in the United Kingdom via volunteer sampling. **All students were social science students with no expertise on food or nutrition. Recruitment was open for one academic year, with students in year 1, 2 and 3 being able to participate.** Students received an online invitation to participate in a study investigating eating behaviours and attitudes. Individuals were excluded if they were diagnosed in the past 12 months with an eating disorder, but none of the participants disclosed this type of information. Twenty-one participants did not complete the questionnaires to the end of the study, and as a result were excluded from the final sample. After exclusions, the final sample included fourteen males and one-hundred and seventy-six females. Participants reported an average age of 20.46 ( $SD = 3.25$ ,  $SE = 0.23$ ), and a mean BMI of 25.00 ( $SD = 7.74$ ,  $SE = 0.56$ ). **Whilst the mean BMI within the present study is within the optimal range, this research provides an introduction into the impact mindfulness, self-compassion and mindful eating have upon motives to eat palatable foods, before research is conducted within clinical populations. Furthermore, it is acknowledged that eating behaviours which develop during university can have an impact upon future BMI scores (Boggiano et al., 2014; Burgess et al., 2014; Mantzios et al., 2018a).** Frequencies and percentages for sex and ethnicity are presented in Table 1. Participants did not receive any benefits or rewards for taking part in this research.

*INSERT TABLE 1*

## *Materials*

### *Participant information sheet*

Participants were requested to report their age, sex, and ethnicity. In order to assess BMI, participants also reported their height and weight; with the following formula being used to calculate BMI: weight in kg / height in m<sup>2</sup>.

### *The palatable eating motives scale (PEMS, Boggiano et al., 2014)*

The PEMS assesses motives for eating palatable but unhealthy foods for reasons outside of hunger. The PEMS consists of 19 items, and utilises a 5-point Likert scale, with responses ranging from 1 (never / almost never) to 5 (always / almost always). Scores for this scale range from 19 to 95. The PEMS instructs individuals to think about times when they have eaten any of the listed foods (e.g. chocolate, cookies, cake, muffins, brownies), and to mark how often they have consumed the foods for a variety of reasons. Sample items include ‘I consume these foods / drinks to forget my worries’; ‘I consume these foods / drinks to get a “high like” or euphoric feelings’. The PEMS is divided into four motives, acknowledging that individuals can consume the listed food and drink due to *coping motives* (to deal with negative states e.g. worry, depression or nervousness); *reward enhancement* (to enhance a positive experience or emotion e.g. because eating that food / drinking that drink is fun or feels pleasant); *social motives* (for social reasons e.g. to enjoy a party or to be more social); and *conformity motives* (due to pressure from others e.g. to fit in). The present study produced an alpha of ( $\alpha = 0.917$ ) for the PEMS **demonstrating internal consistency reliability**, with the reported alpha scores for each motive being as follows: *coping motives* ( $\alpha = 0.917$ ); *reward enhancement motives* ( $\alpha = 0.848$ ); *social motives* ( $\alpha = 0.892$ ); and *conformity motives* ( $\alpha = 0.832$ ).

### *Self-Compassion Scale (SCS; Neff, 2003a)*

The SCS assesses an individual’s likelihood of being self-compassionate during times of distress and disappointment (Neff, 2003a). The SCS consists of 26 items, and utilises a 5-point Likert-type scale, with responses ranging from 1 (almost never) to 5 (almost always). Scores for this scale range from 26 to 130. Sample items include ‘I’m disapproving and judgmental about my own flaws and inadequacies’ (i.e. self-judgement), and ‘I try to be loving towards myself

when I'm feeling emotional pain' (i.e. self-kindness). The present study produced an alpha of ( $a = 0.947$ ) for the SCS **demonstrating internal consistency reliability**, with the SCS being divided into six subscales. Each subscale contains the following number of items, with the reported alpha scores for each subscale being as follows: *self-kindness* (5 items;  $a = 0.868$ ); *self-judgement* (5 items;  $a = 0.878$ ); *common humanity* (4 items;  $a = 0.864$ ); *isolation* ( $a = 0.835$ ); *mindfulness* (4 items;  $a = 0.801$ ); and *over-identification* (4 items;  $a = 0.811$ ).

*Five Facet Mindfulness Questionnaire – Short Form (FFMQ-SF; Bohlmeijer, ten Klooster, Fledderus et al., 2011)*

The FFMQ-SF measures five main characteristics of mindfulness (Bohlmeijer et al., 2011), with the scale consisting of 24 items, and utilising a 5-point Likert-type scale, with responses ranging from 1 (never or rarely true) to 5 (very often or always true). Scores for this scale range from 24 to 120 with higher scores indicating higher levels of mindfulness. Sample items include 'I tell myself that I shouldn't be feeling the way I'm feeling' and 'I make judgements about whether my thoughts are good or bad'. The present study produced an alpha of ( $a = 0.740$ ) for the FFMQ-SF **demonstrating internal consistency reliability**, with the FFMQ-SF being divided into five subscales. Each subscale contains the following number of items, with the reported alpha scores for each subscale being as follows: *observing* (4 items;  $a = 0.746$ ); *describing* (5 items;  $a = 0.872$ ); *acting with awareness* (5 items;  $a = 0.837$ ); *non-judging* (5 items;  $a = 0.774$ ) and *non-reactivity* (5 items;  $a = 0.704$ ).

*The Mindful Eating Behavior Scale (MEBS; Winkens et al., 2018)*

The MEBS was used to measure the level of four domains of the attention element of mindful eating: Focused Eating (5 items, e.g. 'I notice how my food looks'); Eating with Awareness (3 items, e.g. 'I eat something without being really aware of it', reversed item); Eating in response to Hunger and Satiety Cues (5 items, e.g. 'I trust my body to tell me when to eat'); and Eating without Distraction (4 items, e.g. 'I multi-task when I am eating', reversed item). Answer options ranged from 1 'never' to 5 'very often'. Higher scores indicate a higher level of mindful eating. Cronbach's alpha of the mindful eating domains were 0.771 for Focused Eating, 0.828 for Eating in response to Hunger and Satiety Cues, 0.907 for Eating with

Awareness, and 0.717 for Eating without Distraction, and 0.791 for the overall score; **demonstrating internal consistency reliability.**

### *Procedure and Design*

Potential participants, who were all students attending a university within the West Midlands United Kingdom, responded to online invitations to take part in the present study. Potential participants were provided with a link to click on, which directed them to a participant information sheet containing all study information, along with the researchers contact details. Those who wished to participate were then directed to a consent form. Upon providing written informed consent, participants were presented with the demographic form and the questionnaires. **The researchers have previously used these questionnaires in research conducted on students, with these scales being validated for use with this population.** Once the study was complete, participants were presented with a debriefing sheet, informing them of the study, and again providing participants with the contact details of the researchers if they wanted to withdraw, or wished to find out the results of the study at a later date. Ethical approval was granted by the Universities Research Ethics Committee (ref: FREC002.16), with the study conforming to the ethical guidelines set by the British Psychological Society.

### *Analysis*

**Data was analysed using correlation analysis to investigate the relationship between mindfulness, mindful eating, self-compassion and motivations to eat palatable foods. SPSS 22.0 for Windows was utilised to perform the analysis.**

### **Results**

When exploring the interrelation between factors of the MBEQ, the amount of association justified a decision to use an overall score for the MBEQ, rather than analyse the sub-scales. The correlation between MBEQ and FFMQ sub-scales were as expected, and Aware Eating correlated positively with Observing, Acting with Awareness, Non-Reactivity and Describing. What is interesting in the results, and propose another topic of debate that will be further explored later in the discussion is the association of Non-Judgment of the FFMQ to the Aware Eating and Eating without Distraction MBEQ subscales, when the authors of the new



mindful eating scale proposed that non-judgement is not measured in the new mindful eating scale (see Table 2 for further results).

*INSERT TABLE 2*

A second bivariate correlation analysis displayed a significant negative correlation between Self-compassion and Motivations to eat palatable foods ( $r_p = -0.43, p < .001$ ), which was significant also for the Social subscale ( $r_p = -0.29, p < .001$ ), the Coping subscale ( $r_p = -0.46, p < .001$ ), and the Enhancement subscale ( $r_p = -0.32, p < .001$ ). Self-compassion also displayed a significant positive relationship to Mindful eating behavior ( $r_p = 0.34, p < .001$ ). Contrary to expectations, a significant positive correlation was observed between Mindfulness and Motivations to eat palatable foods ( $r_p = 0.22, p = .006$ ), which was also observed for the Enhancement subscale ( $r_p = 0.23, p = .004$ ) and the Conformity subscale ( $r_p = 0.18, p = .027$ ).

Additionally, a significant negative correlation was observed between Mindful eating behavior and BMI ( $r_p = -0.21, p = .010$ ). Contrary, a significant negative correlation was observed between Mindful eating behavior and Motivations to eat palatable foods ( $r_p = -0.47, p < .001$ ), and Social ( $r_p = -0.26, p = .001$ ), Coping ( $r_p = -0.49, p < .001$ ), Enhancement ( $r_p = -0.37, p < .001$ ) and Conformity ( $r_p = -0.26, p = .001$ ) subscales. Table 3 presents the results of the correlations.

*INSERT TABLE 3*

### *Mediation*

First, the regression of Motivations to eat palatable foods on Mindful eating behavior was significant,  $F(2, 157) = 32.02, p < .001, B = -0.64$ , indicating that the first criterion for mediation was satisfied. Second, the regression of Mindfulness on Mindful eating behavior was not significant,  $F(2, 157) = 2.30, p = .131, B = -0.11$ , indicating that the second criterion for mediation was not satisfied. Next, the regression of Motivations to eat palatable foods on Mindful eating behavior and Mindfulness was significant,  $F(3, 156) = 19.10, p < .001$ . The results further showed that Mindfulness was a significant predictor of Motivations to eat palatable foods when Mindful eating behavior was included in the model,  $B = 0.28$ , indicating that the third criterion for mediation was satisfied. The results showed that Mindful eating behavior was a significant predictor of Motivations to eat palatable foods when Mindfulness was included in the model,  $B = -0.61$ , indicating that the fourth criterion for mediation was not satisfied. Since item 2 and item 4 were not met, mediation could not be supported. See Table 4 for mediation results.

*INSERT TABLE 4*

### *Mediation*

First, the regression of Motivations to eat palatable foods on Mindful eating behavior was significant,  $F(2, 175) = 32.29, p < .001, B = -0.62$ , indicating that the first criterion for mediation was satisfied. Second, the regression of Self-compassion on Mindful eating behavior was significant,  $F(2, 175) = 14.32, p < .001, B = 0.60$ , indicating that the second criterion for mediation was satisfied. Next, the regression of Motivations to eat palatable foods on Mindful eating behavior and Self-compassion was significant,  $F(3, 174) = 30.70, p < .001$ , suggesting

that Mindful eating behavior and Self-compassion accounted for a significant amount of variance in Motivations to eat palatable foods . The results showed that Self-compassion was a significant predictor of Motivations to eat palatable foods when Mindful eating behavior was included in the model,  $B = -0.24$ , indicating that the third criterion for mediation was satisfied. The results showed that Mindful eating behavior was a significant predictor of Motivations to eat palatable foods when Self-compassion was included in the model,  $B = -0.48$ , indicating that the fourth criterion for mediation was not satisfied. Since items 1, 2, and 3 were met, while item 4 was not, partial mediation was supported. See Table 5 for mediation results.

*INSERT TABLE 5*

## **Discussion**

This study aimed to explore the relationship between mindfulness, self-compassion, and especially mindful eating and motives for consuming energy-dense foods amongst University students. As expected, self-compassion appeared to influence eating motives, with participants who demonstrated higher levels of self-compassion displaying less motivation to eat palatable but unhealthy foods; this was significant for social, coping and enhancement motivations. Higher levels of self-compassion were associated with participants eating in a mindful way; with results illustrating that those participants who demonstrated higher levels of mindful eating had less motivation to eat palatable foods, and also had lower BMI's, this was significant for social, coping, enhancement and conformity motivations. These findings are in line with previous research (Jordan et al., 2015; Mantzios et al., 2018b) in suggesting that mindful eating is associated with healthier eating and lower BMIs, while Mantzios et al (2018b) highlighted the same relationships, regardless of the previously used mindfulness scale being inclusive of non-judgment (which we discuss later ).

When findings were explored further a mediation effect was observed for mindful eating on motivations to eat palatable foods via self-compassion, which was not the case with

mindfulness as originally expected. This suggests that interventions within a student population need to encourage self-compassion and mindful eating in an aim to decrease the likelihood of individuals feeling motivated to eat energy-dense foods. Such interventions could focus upon encouraging non-judgement amongst students, which is expressed within the SCS, but not the MEBS (Winkens et al., 2018). Several interventions have been used targeting non-judgement to aid weight regulation (Kristeller, Baer & Quillian-Wolever, 2006; Mantzios & Giannou, 2014), such as the mindful concrete construal diary (MCD) which encourages individuals to be present in the moment whilst also being kind and non-judgmental to thoughts and feelings that arise during each meal (Mantzios & Wilson, 2014). Work is now needed to investigate the influence such interventions would have in reducing the consumption of palatable and unhealthy foods, with other research suggesting that there is more of a need to explore the attention and awareness of meals. The consideration here is whether such a defined focus does justice to exploring the full potential of mindfulness and mindful eating.

In practice there is merit in the notion of separating mindfulness into present moment awareness and non-judgment. While some people suggest that the present moment attentiveness is the basis of developing non-judgment as a meta-construct (Brown & Ryan, 2003), both elements are fundamentally needed to claim a mindfulness practice, whether it relates to eating or not. Suggesting in this new scale that there is only an exploration of present moment attentiveness in eating is, in many ways, fundamentally instigating a different nature of exploring eating behaviors that is either not including non-judgement and is going along with the literature around attentive eating (e.g., Whitelock et al., 2019) or, a somehow separate cognitive approach that is considering distraction to a greater extent (see Mantzios, Egan, Wallis et al., 2019 for discussion). For now, the proposition of Winkens et al (2018) that the scale is not measuring non-judgment should be approached with caution, as not being distracted may suggest a higher ability to remain non-judgmental during meals.

Whilst these findings provide suggestions for future interventions, and potentially a reinterpretation of elements that are investigated and explored in eating literature, limitations do need to be acknowledged. This research did not distinguish whether participants were living in university accommodation, independently or within the parental home. With previous research acknowledging that the most common barriers to healthy eating is the accessibility of unhealthy

palatable foods (Ashton et al., 2016; McMorrow et al., 2017), future research should investigate how a students living arrangements specifically influence eating behaviours and attitudes.

Whilst, this research purposely focused upon University students due to the changes occurring during the transition to University in eating behaviours (Brown, 2008; Sprake et al., 2017; Tanton, et al., 2015), this fundamentally limits the generalization of findings. Furthermore, the average reported BMI for participants within this research was within the optimal range, suggesting potential replications within obese and bariatric populations, as well as amongst disordered eaters and dieters. Future research is further needed to investigate the consumption of energy-dense foods in relation to mindfulness, self-compassion and mindful eating amongst clinical and non-clinical populations by utilising experimental and longitudinal methods to allow causal and directional interpretations (see Mantzios & Giannou, 2018 for further directions). Lastly, within the present study males were underrepresented, with ethnicity also containing unequal representation; this was as a consequence of volunteer sampling being utilized meaning that the researchers could not control for demographic characteristics. Future research needs to investigate males as well as all ethnicities in an attempt of exploring the potential of mindfulness-based scales and interventions with sub-constructs explored in the motives to eat palatable foods (such as enhancement).

Overall, this study provides insight into the influence of mindful eating and self-compassion upon motives to eat palatable, unhealthy foods amongst University students. The findings from this research could inform interventions focusing upon reducing the consumption of energy-dense foods in student populations. For now, it can be assumed that mindful-eating and self-compassion interventions could be useful in reducing motivations to consume energy-dense foods.

## **Ethical Statements**

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### Funding

This study received no funding.

### Availability of data and materials

Data is available upon request.

### Authors' contributions

RK – Recruitment, data collection, writing – original draft, writing – review & editing.

HE – Recruitment, data collection, writing – review & editing.

MM – Recruitment, data collection, data analysis, writing – review & editing.

### Conflict of interest

Author A (RK), B (HE) and C (MM) declare that they have no conflict of interest.

### Consent for publication

All authors agree with the final revisions and in submitting this paper to the Nutrition and Health Journal for publication.

### Ethical Approval

All procedures performed within this research which involved human participants was in accordance with the ethical standards of the institutional and/or national research committee (Business, Law and Social Sciences Ethics Committee at Birmingham City University) and with the 1964 Helsinki declaration and its later amendments.

Written informed consent was obtained from all individual participants included in the study.

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Table 1

*Frequency Table for Demographic Information*

Variable	<i>n</i>
Sex	
Female	188
Male	15
Missing	8
Ethnicity	
ASIAN - Indian	17
WHITE - English Welsh Scottish Northern Irish British	125
Any other ethnic group	8
ASIAN - Bangladeshi	8
MIXED - White and Black African	1
ASIAN - Pakistani	25
MIXED - White and Black Caribbean	6
African	5
MIXED - White and Asian	2
Caribbean	4
ASIAN - Chinese	1
Arab	1
Missing	8

Table 2

Bivariate correlations between MBEQ and FFMQ sub-scales

Variable	1	2	3	4	5	6	7	8	9
1.MBEQ Focused Eating	1								
2.MBEQ Hunger Satiety	.363**	1							
3.MBEQ Awareness Eating	.282**	.269**	1						
4.MBEQ Eating without Distraction	.146*	.070	.228**	1					
5.FFMQ Observing	.326**	.106	.154*	-.009	1				
6.FFMQ Act Aware	.285**	.177*	.336**	.382**	.132	1			
7.FFMQ Non-Judge	.085	.097	.145*	.310**	.170*	.407**	1		
8.FFMQ Non-React	.178*	.230**	.135	.104	.209**	.205**	.307**	1	
9.FFMQ Describe	.166*	.178*	.156*	.040	.107	.342**	.223**	.271**	1

Table 3

*Pearson Correlation Matrix among Self-compassion, Mindfulness, BMI, Motivations to Eat Palatable Food (MEPF) and subscales, and Mindful eating behavior.*

Variable	1	2	3	4	5	6	7	8	9
1. Self-compassion	-								
2. <i>Mindfulness</i>	-0.00	-							
3. BMI	-0.05	0.07	-						
4. <i>MEPF</i>	-0.43***	0.22**	0.14	-					
5. <i>MEPF</i> -Social	-0.29***	0.15	0.13	0.80***	-				
6. <i>MEPF</i> -Coping	-0.46***	0.13	0.12	0.78***	0.44***	-			
7. <i>MEPF</i> -Enhancement	-0.32***	0.23***	0.08	0.80***	0.49***	0.50***	-		
8. <i>MEPF</i> -Conformity	-0.13	0.18*	0.09	0.61***	0.51***	0.26***	0.34***	-	
9. Mindful Eating Behavior	0.34***	-0.09	-0.21**	-0.47***	-0.26***	-0.49***	-0.37***	-0.26***	-

*Note.* \* $<.05$ ; \*\* $<.01$ ; \*\*\* $<.001$

Table 4

*Mediation Results*

Dependent	Independent	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Regression 1:					
Motivations to eat palatable foods	Mindful eating behavior	-0.64	0.11	-5.66	< .001
Regression 2:					
Mindfulness	Mindful eating behavior	-0.11	0.07	-1.52	.131
Regression 3:					
Motivations to eat palatable foods	Mindful eating behavior	-0.61	0.11	-5.42	< .001
	Mindfulness	0.28	0.12	2.30	.023

Table 5

*Mediation Results*

Dependent	Independent	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Regression 1:					
Motivations to eat palatable foods	Mindful eating behavior	-0.62	0.11	-5.68	< .001
Regression 2:					
Self-compassion	Mindful eating behavior	0.60	0.16	3.78	< .001
Regression 3:					
Motivations to eat palatable foods	Mindful eating behavior	-0.48	0.11	-4.45	< .001
	Self-compassion	-0.24	0.05	-4.97	< .001