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Eating Your Feelings: The Relationship Between Core Affect and Food Choices

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Author Note

A thesis completed under the mentorship of Dr. Kristjen Lundberg and submitted in partial fulfillment of the requirements for the Honors Program in the Department of Psychology.

Abstract

The psychology of eating behavior is increasingly important given that more than one-third of Americans are obese, with 74% of men considered overweight or obese (Overweight and Obesity Statistics, 2012). This study examines the relationship between core affect and healthy food choices. Though previous research has examined relationships between specific emotions and eating behavior, little is known about core affect or about these relationships in more naturalistic settings (outside the lab). To evaluate the role of core affect in healthy food choices, a field study was conducted in the University of Richmond (UR) dining hall to measure UR students' core affect and their food choices on three separate occasions. It was originally hypothesized that people who experience positive, low-arousal emotions will choose healthier foods. However, this was not supported by the data. Instead, it was found that people who experience higher arousal on average tended to make healthier food choices. Increasing our knowledge about the determinants of healthy eating may help individuals, as well as the country, to see more hope for a healthier future.

Keywords: core affect, arousal, valence, food choices, healthy, eating behavior, emotion

Eating Your Feelings: The Relationship Between Core Affect and Food Choices

All over the world, the percentage of adults and children who are obese is increasing at faster and faster rates. About a third of the American population is obese. With obesity comes a range of health problems such as high blood pressure, stroke, type two diabetes, and heart disease (Fryar & Ogden, 2012). Moreover, with the apparent prevalence of low-fat or low-sugar products, self-help books, and workout and/or dieting guides and programs, it is evident that people are concerned about making healthier choices. Given this concern and the issue underlying it, it is important to understand psychological factors that might promote healthier eating.

Research has shown that people's affective states can directly influence our physical health by altering our physiology (e.g., the functioning of our cardiovascular system; e.g., Kubzansky, Cole, Kawachi, Vokonas, & Sparrow, 2006). But, they can also indirectly influence our physical health by influencing our health behaviors, e.g., whether or not we choose to exercise or smoke, and most importantly for this study, what we eat and drink. (for an overview, see Consedine, 2008).

In the current study, I examined the relationship between core affect and food choices. Core affect is an emotion-related state that has some degree of valence (pleasant-unpleasant) and some degree of arousal (high energy-low energy; Russell, Weiss, & Mendelsohn, 1989). For example, unpleasant, high-arousal core affect underlies emotions such as anger, whereas pleasant, low-arousal core affect underlies serenity. This study collected data on the participant's core affect and observed the food choices of the participants in their natural eating environment, the University of Richmond dining hall, on up to three occasions. Though previous research has examined relationships between specific emotions—such as happiness and stress—and eating

behavior (e.g., Wansink & Sangermann, 2000) and has considered valence and arousal as distinct concepts (e.g., Fedorikhin & Patrick, 2010), few studies have directly examined core affect and/or the interaction between valence and arousal in predicting food choices. Further, little is known about these relationships in more naturalistic settings (outside the lab). Additionally, by collecting multiple observations from single individuals, the current study not only looks at how individuals with different affective profiles differ from each other, but also how daily fluctuations in core affect are associated with daily fluctuations in healthy food choices. The following review of studies will provide background for us to predict the ways in which core affect—the focus of my research project—could affect food choices.

A segment of the research literature has found that positive valence emotions may be correlated with unhealthier food choices. For example, Wansink and Sangermann (2000) found that “People were more likely to seek out comfort foods when they were happy (86%) or when they wanted to celebrate or reward themselves (74%) than when they were depressed (39%), bored (52%), or lonely (39%).” Interestingly, however, the type of comfort foods people reported craving varied based on their mood, too, telling a slightly different story: Happy people tended to want relatively healthier comfort foods such as pizza or steak (32% of the time), while sad people tended to prefer ice cream and cookies (39%), and bored people tended to prefer potato chips (36%). Similarly, Macht, Roth, and Ellgring (2002) found that joy increased people’s motivation to eat and in joy, a higher tendency to eat chocolate was reported, when compared to sadness.

However, other studies have found the opposite: that positively valenced affective states lead to healthier consumption choices. For example, Gardner, Wansink, Kim, and Park (2014) found that people tend to choose healthier foods when they are in good moods, or experiencing

positive valence. They explain this with two theories: (1) affective regulation (preferring foods which will improve a negative mood or maintain a positive mood and avoiding foods that may destroy a positive mood or make a negative mood worse); and (2) temporal construal (how much people prioritize the long-term health benefits over the short-term mood benefits when deciding what to eat). When people experience negative emotions, they tend to focus on the now, whereas when people experience positive emotions they tend to focus on the bigger picture. Therefore, in a negative mood, people focus on the immediate sensory qualities of food, such as the taste and texture of it and they do not think about the nutrition or health of it. Additionally, for restrained eaters (i.e., those who are counting calories), negative emotions can lead to greater and unrestrained food consumption because coping with the emotion becomes the subject's main concern, rather than dieting. As humans, we have limited capacity over what our brains can have full cognitive control over at once. If an emotional stimulus is requiring attention, then cognitive control can be distracted from focusing wholly on eating, and therefore be impaired (Greeno & Wing, 1994). This information supports the research that high arousal impairs our cognitive abilities to regulate foods because the brain is distracted by the high arousal experience. Therefore, it would make sense that people experiencing high arousal may eat unhealthier or may overeat.

At issue in these studies is a more comprehensive consideration of the role of arousal. The food choices associated with a high-arousal positive state may differ from those associated with a low-arousal positive state. For example, Robbins and Fray (1980) found that intense stress, which has core affect components of high arousal and negative valence, significantly reduces food intake in animal and humans studies. These intense emotions not only affect psychological responses, but also bodily responses that interfere with eating. For example,

intense sadness triggers withdrawal and deactivation and intense fear elicits flight and avoidance (Blair, Wing, & Wald, 1991). Stress also affects digestion itself by slowing down glucose absorption and gastrointestinal transit (Wing, Blair, & Epstein, 1990). Therefore, intense emotions such as stress and sadness may cause people to consume less since their minds are withdrawing from food and their bodies are staying full longer with slower digestion.

A number of studies have jointly considered the roles of valence and arousal in determining food choices. For example, Winterich and Haws (2011) found participants experiencing positive emotions, specifically future-focused positive emotions, such as hopefulness (a positive valence, low-arousal emotion), ate lesser amounts of unhealthy food and had lower preferences for unhealthy foods than participants in a past- or present-focused emotional state, such as pride and happiness (positive valence, high-arousal emotions). Though this result is explained by changes in the temporal construal associated with these emotional states, the authors also argue that it could also be because hopefulness is a low-arousal emotion, while pride and happiness are high-arousal emotions. Winterich and Haws (2011) argue that “arousal is of particular relevance when individuals are facing temptation or indulgence” and that “high arousal tends to diminish cognitive capacity to regulate behavior.” In other words, high-arousal states might interfere with one’s ability to self-regulate, focus on longer-term goals, and make healthier food choices. If so, this could explain why participants may make healthier decisions while they are experiencing a positive, high-arousal emotional state.

Similarly, Fedorikhin and Patrick (2010) also found that high arousal is correlated with healthier food choices. When participants were given a choice of M&Ms or grapes, an unhealthy versus healthy snack, participants experiencing a high-arousal, positive emotion were more likely to consume the M&Ms than participants experiencing the low-arousal, positive

emotion. They also argued that a high arousal state interferes with people's cognitive capacity to self-regulate themselves, leading them to give in to tempting unhealthy foods more easily.

Critically, these previous studies have researched discrete emotions, but not core affect itself. Unlike discrete emotions such as happiness or anger, core affect is always present, and it is not only affected by emotion-related processes (e.g., perceptions of injustice or offense that lead to anger), but also by other physiological processes (e.g., exercise, release of hormones, illness; see Lindquist, 2013). Nevertheless, each of the components of core affect may have additive effects or an interactive effect on eating behavior. As an example of an interactive effect, the effect of positive emotional states on eating behavior may differ based on whether it is high or low arousal.

Given the existing research (particularly the work by Fedorikhin & Patrick, 2010), I predicted an interactive affect. I hypothesized that participants experiencing high arousal and positive emotions will make the least healthy food choices and that participants experiencing low arousal and positive emotions will make the healthiest food choices. Though some support for this hypothesis already exists, all of the previous studies were done in a controlled lab setting. Therefore, this study will take place in a more naturalistic setting, specifically the Heilman Dining Center where UR students eat daily.

Method

My hypothesis was evaluated using a field study that took place over the course of approximately one week in October 2016. Participants' levels of core affect and food choices were measured on three separate days in the campus dining hall at lunchtime. This study was reviewed by and received approval from the University of Richmond Institutional Review Board.

Recruitment Procedure

Undergraduate student participants were recruited at the University of Richmond using a variety of advertising strategies, including announcements posted on the campus-wide emailing service and Facebook, fliers posted in academic and residential buildings, and in-person recruitment in the dining hall. Because we were concerned that participants would alter their eating behavior if they knew the study was about the healthiness of their meal choices, they were told that the study was about students' experiences on campus and their satisfaction with the dining hall. Students initially expressed interest in participating by emailing the lab. They were then sent more comprehensive information about what the study would entail and if they expressed interest a second time, then they were directed to the consent form and allowed to enroll in the study. All participants were compensated for their time and informed consent was received from every participant before they began the survey. Participants were paid \$1 for each day of surveys they completed and received a bonus for completing all three days. Therefore, a student who completed two days would receive \$2, but a student who completed all three days received \$5, the maximum amount.

Participants

A group of 57 participants was surveyed in this study (47.1% female, 52.9% male; 85.3% European-American, Anglo, or Caucasian (White); $M_{age} = 19.2$, $SD_{age} = 1.56$).¹ In total, those 57

¹ Originally, there were 102 participants recruited. However, only 57 of those participants provided enough data to be considered for the experiment. Reasons for exclusion included: only completing the initial demographics survey, not submitting a post-lunch survey to complement a pre-lunch survey, and submitting a post-lunch survey without uploading a picture.

participants completed 137 daily surveys, with 21.1% of participants completing only one, 17.5% completing two, and 61.4% completing three.

Survey Procedure

Three types of surveys were administered to participants. First, at the time of enrollment and informed consent, participants completed an online survey that requested basic demographic information (e.g., gender, year in school). Then, participants were allowed to choose three out of the four possible days to complete their lunchtime surveys. On a day that they decided to participate, participants met the researchers in the lobby of the dining hall and completed the second type of survey—a pre-lunch survey, which measured core affect, on paper before going inside to eat lunch. Because I hypothesized that affective experiences might influence food choices and because there is previous research showing that food influences our moods (e.g., Ottley, 2000), it was critical that core affect was measured prior to meal selection and consumption. After completing this survey, the researchers emailed participants the third type of survey—a post-lunch survey, which was to be completed online as soon as possible following lunch. Participants were asked to take a picture(s) of all foods and drinks consumed during lunch, and to upload them onto the post-lunch survey. In the post-lunch survey, they were also asked questions about their satisfaction with the dining hall to disguise the true purpose of the study.²

Core Affect Measure

In the pre-lunch survey, the study used a core affect grid, in which participants were asked to mark an “X” on the box of the grid that best described their current feelings state

² While dining hall satisfaction survey information did not pertain to the study, the results were shared with the dining hall staff.

(Russell et al., 1989). The grid had a range of -4 to +4 for both valence on the *x*-axis and arousal on the *y*-axis, with +4 representing the highest possible valence or arousal. On the grid, there were cue words written to help guide the participants. For example, the word “excitement” was written above the box at (4,4) and “stress” was written above the box at (-4,4). An arousal and valence score was extracted from each “X” on the grid by taking its coordinates on the axes.³

Healthy Selection Coding Procedure

After data collection was completed, the photos were organized to indicate the participant’s study identification number and meal number. The healthiness of each meal was jointly coded by the University of Richmond nutritionist and the principal researcher using the Healthy Meal Index (HMI; Kasper, Mandell, Ball, Miller, Lumeng, & Peterson, 2016). Because no other survey data was attached to the photos, there was little to no possibility that prior knowledge of the hypothesis biased the coding process. Also, because the HMI has a very structured point system, it was deemed unnecessary for the two coders to work separately.

The HMI gives each meal a score from 15 to 95. Points are added for each food group present in the meal (e.g., 10 points for the presence of a fruit, 5 points for the presence of any whole or refined grain), as well as bonus points for whole grains, healthy fats, and more than two types of vegetables. Points are also awarded for the *absence* of other foods (e.g., 10 points for the absence of a high sugar food, a sweetened drink (including diet drinks), or fried foods, pork, or beef). The original HMI scale was used as stated, with the exception of the standard used for convenience foods. This was deemed inappropriate for this setting and population given that many foods served in the dining hall are processed or prepackaged, even romaine lettuce or apples.

³ Other measures of emotion were also completed, but none pertains to the central hypothesis of this study.

Scoring criteria for Healthy Meal Index.

HMI components	Awarded score ^a			Definition
	0	5	10	
Adequacy score				
Fruit	N		Y	Fruit, excluding juice
Vegetables	N		Y	Vegetables, excluding fried potatoes
Vegetable quality	N	Y		Dark Green/Red/Orange Vegetables & Legumes
Vegetable variety	N	Y		≥2 types of vegetables
Grains	N	Y		Any whole or refined grain, excludes fried/salty snacks
Whole grains	N	Y		Any whole grain, excludes fried/salty snacks
Dairy	N		Y	Dairy or dairy substitutes
Protein	N		Y	Meat, nuts, legumes, eggs, meat substitutes
Healthy fats	N	Y		Fish, nuts, avocados
Moderation score				
Convenience foods	Y		N	Take-out, fast food, prepackaged, and processed
SSB or diet drinks	Y		N	Drinks with added sugar, diet drinks, flavored milk
Added & saturated fats	Y		N	Fried foods, beef, pork
Desserts & sweets	Y		N	Foods with high added sugar

a Y indicates the score awarded if the food was available at the meal and N indicates the score awarded if the food was unavailable.

Figure 1. The original scoring criteria as outlined by Kasper et al. (2016). These criteria were followed exactly with the exception of “Convenience foods,” which was omitted

As one example of how the scheme is applied, a plate of chicken tenders and French fries would receive a relatively low score of 30 points: 10 points for “Meat, nuts, legumes, eggs, meat substitutes” present, 10 points for no “Drinks with added sugar, diet drinks, flavored milk” present, and 10 points for no “Foods with high added sugar” present. In contrast, a whole grain pasta with spinach, tomatoes, peppers, chicken, and cheese with an apple would receive a relatively high score of 90 points: 10 points for a fruit, 10 points for a vegetable, 5 points for a dark green vegetable, 5 points for 2 or more vegetables, 10 points for a whole grain, 10 points for

dairy, 10 points for meat, 10 points for no drink with added sugar, diet drinks, flavored milk, 10 points for no fried foods, beef, pork, and 10 points for no food with high added sugar.

Results

Preliminary Analyses

First, to evaluate the general nature of the relationships between my primary variables of interest, I calculated mean scores for valence, arousal, and HMI scores by averaging across the scores obtained from participants' daily surveys. Descriptive statistics and correlations for these variables can be found in Table 1. Notably, there is a marginally significant positive correlation between average arousal and average HMI score ($r = 2.13, p = .053$). On average, as a person's mean arousal increases, their mean HMI score increases. No other correlations were significant ($p > 0.05$).

Table 1

Descriptive Statistics and Correlations

	Average Arousal	Average Valence	Average HMI Score
Average Arousal	0.19 (1.48)		
Average Valence	0.15	0.84 (1.37)	
Average HMI Score	0.26*	0.15	60.67 (11.82)

Note. Means and standard deviations (in parentheses) appear in bold along the diagonal.

Correlations between variables appear below the diagonal. * $p < .10$

Data Analysis Plan

To evaluate the main hypothesis regarding the interaction between valence and arousal in predicting healthy meal choices, multilevel modeling was used. This analytic strategy was deemed necessary given that most participants completed more than one survey. Having more than one observation from a single participant likely violates the assumption of independence.

The intraclass correlation (ICC) of 0.23 confirmed the non-independent nature of the data, suggesting that individuals' HMI scores were minorly correlated. Additionally, a primary intent of the study was to examine within-person differences. In other words, on days when a person's core affect differs from that person's average, how does that person's food choices differ from his or her average? Multilevel modeling affords me the opportunity to address such a question directly.

In order to observe the unique and interactive associations of valence and arousal with HMI at both the within- and between-person levels, multilevel regression models were specified with multiple daily HMI scores (Level 1, denoted by the subscript i) nested within people (Level 2, denoted by the subscript j) and estimated using the "mixed" procedure and restricted (residual) maximum likelihood (REML) estimator available in IBM SPSS Statistics version 24.

In order to estimate the within-person associations involving valence and arousal, daily valence and arousal scores were person-mean-centered (e.g., daily arousal score minus participant's mean arousal score) such that each daily score represented a deviation from the participant's own mean (see Enders & Tofighi, 2007). These person-mean-centered scores, as well as the interaction term created by multiplying them together (see Aiken & West, 1991), appear in the Level 1 and reduced-form equations that follow, as identified by the "_pmc" suffix:

$$\text{Level 1 (day-level):} \quad y_{ij} = \beta_{0j} + \beta_{1j} \textit{valence_pmc}_{ij} + \beta_{2j} \textit{arousal_pmc}_{ij} + \beta_{3j} \textit{valence_pmc}_{ij} * \textit{arousal_pmc}_{ij} + r_{ij}$$

$$\text{Level 2 (person-level):} \quad \beta_{0j} = \gamma_{00} + \gamma_{01} \textit{valence_mean}_j + \gamma_{02} \textit{arousal_mean}_j + \gamma_{03} \textit{valence_mean}_j * \textit{arousal_mean}_j + u_{0j}$$

$$\beta_{1j} = \gamma_{10}$$

$$\beta_{2j} = \gamma_{20}$$

$$\beta_{3j} = \gamma_{30}$$

Reduced form equation:

$$y_{ij} = \gamma_{00} + \gamma_{01} \text{valence_pmc}_{ij} + \gamma_{02} \text{arousal_pmc}_{ij} + \gamma_{03} \text{valence_pmc}_{ij} * \text{arousal_pmc}_{ij} + \gamma_{10} \text{valence_mean}_j + \gamma_{20} \text{arousal_mean}_j + \gamma_{30} \text{valence_mean}_j * \text{arousal_mean}_j + u_{0j} + r_{ij}$$

In order to estimate the between-person associations involving valence and arousal, participants' mean arousal and valence scores (e.g., daily arousal scores averaged across the three days), as well as the interaction term created by multiplying them together, were included as predictors. They can be identified by the “_mean” suffix in the preceding equations. These means were not grand-mean-centered given that 0 has meaningful interpretations as neutral valence or arousal.

To obtain an estimate of the conditional variability across participants in levels of HMI scores, a random effects component was included for the intercept. It was assumed that the within-person residuals (r_{ij}) were independent and that both the residuals and the random effect (u_{0j}) were normally distributed with means of 0 and variances of σ^2 and τ_{00} , respectively.

The Relationship between Core Affect and Healthy Food Choices

Results from my multilevel multiple linear regression analysis can be found in Table 2. Model 1 shows the main effects of valence and arousal with HMI as the dependent variable. Model 2 adds the interaction terms at both the between- and within-person levels. In Model 2 with the interaction, the association of arousal with HMI is positive and marginally significant, while in Model 1 without the interaction, the association is significant. There were no other significant findings.

Table 2

Results from Multilevel Models Predicting HMI Scores from Core Affect

	Model 1			Model 2		
	<i>B</i> (SE)	95% CI	<i>p</i>	<i>B</i> (SE)	95% CI	<i>p</i>
Intercept	58.9 (1.67)	[55.5, 62.2]	.000	59.5 (1.70)	[56.1, 62.90]	.000
Within-person effects						
Arousal	.084 (.964)	[-1.84, 2.00]	.931	.306 (.992)	[-1.67, 2.28]	.758
Valence	-.342 (.960)	[-2.25, 1.57]	.723	-.350 (.973)	[-2.29, 1.59]	.720
Arousal*Valence	--	--	--	1.08 (.790)	[-.483, 2.64]	.174
Between-person effects						
Arousal	2.26 (1.02)	[.220, 4.30]	.031	2.13 (1.07)	[-.026, 4.29]	.053
Valence	1.73 (1.05)	[-.374, 3.84]	.104	1.29 (1.11)	[-.946, 3.53]	.251
Arousal*Valence	--	--	--	.144 (.752)	[-1.37, 1.66]	.849

Probing the Non-Significant Interaction at the Within-Person Level

Though the within-person interaction was non-significant, it may have been non-significant due to a power issue, and therefore the direction of the effects may still be suggestive of the true nature of these relationships. Therefore, we elected to further probe the interaction using guidelines and online computational tools from Preacher, Curran, and Bauer (2006). Though none of the simple slopes is significant ($ps > 0.05$), the pattern of this interaction suggests that, on days when an individual is experiencing higher arousal, she will make healthier food choices if she is also experiencing increased positivity, while on days when she is experiencing lower arousal, she will make worse food choices if she is also experiencing increased positivity. Equivalently, an individual experiencing low arousal and negative valence (e.g., depression) will have a higher HMI score than the same individual experiencing high arousal and negative valence (e.g., anger, frustration). Moreover, an individual experiencing high arousal and positive valence (e.g., excitement) will have a higher HMI score than when the same individual experiences low arousal and positive valence (e.g. contentment, serenity). Therefore, it seems that for negative emotions, or low valence emotions, people choose healthier, more balanced meals when they experience low arousal. But, for positive emotions, or high valence emotions, people choose healthier, more balanced meals when they experience high arousal.

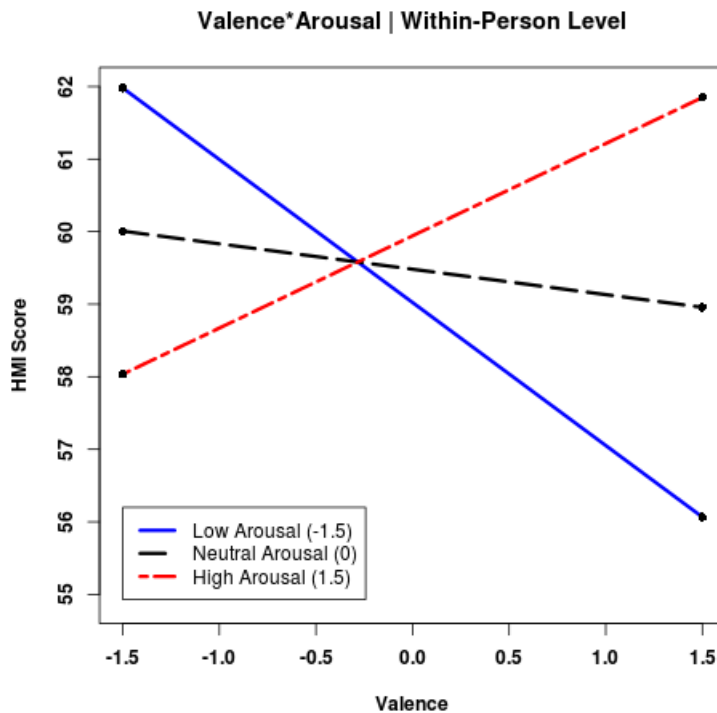


Figure 2. Graph depicting the within-person interaction between valence and arousal in predicting HMI scores.

Discussion

It was originally hypothesized that people who experience positive, low-arousal emotions will choose healthier foods. However, this was not supported by the data. Instead, it was found that people who experience higher arousal on average, made healthier food choices. These findings contradict Winterich and Haws (2011) who argue that high-arousal states might interfere with one's ability to self-regulate, focus on longer-term goals, and make healthier food choices. It also contradicts Fedorikhin and Patrick (2010) who found that people experiencing positive, high arousal made unhealthier food choices.

How can we explain this surprising finding? Because the majority of points for an HMI score come from how balanced a meal is (i.e., the number of food groups a meal contains), it may be that those who are more energetic also choose a greater variety of foods. For example, a

person may require more arousal or energy to walk around the dining hall and put a variety of foods on his or her plate or tray. Those who exercise frequently may feel more energetic and also need more calories to maintain their regimen. They may also be more attentive to maintaining a balanced diet.

Although the within-person interaction between valence and arousal was not significant, it was a central part of my hypothesis, and therefore I elected to further probe and interpret the results. The interaction suggests that for negative affective states, when people are experiencing lower-arousal than average, they make healthier choices. However, for positive affective states, when people are experiencing higher-arousal than their average, they make healthier choices. This could be explained by the fact that when people are feeling depressed, a negative, low-arousal emotion, they may feel the need to improve at least one aspect of their life—maintaining a healthy diet—in order to make themselves feel better. In contrast, people who are content or serene, a positive, low-arousal emotion, may feel that they need to eat something decadent to boost their arousal to achieve the positive, high-arousal state, which is often considered the “ideal” state to be in amongst Americans (Tsai, 2007).

One limitation of this study is in the HMI, the point system we used to rate the healthiness of each meal. As the nutritionist and I were coding the pictures, we soon realized that the HMI measures how well balanced a meal is, rather than how healthy it is. For example, a green salad with grilled chicken would not receive a high score because it would be missing grains, fruits, and possibly dairy. If the salad only contained romaine lettuce, then it would also miss points for not having several different vegetables or for not having a dark green, red, or orange colored vegetable. Additionally, the HMI does not take into consideration portion sizes. For example, a salad and a pizza with only a sprinkle of tomato and peppers would both receive

10 points for having a vegetable, even though there were barely any vegetables on the pizza. Finally, sometimes the scoring system was ambiguous. For example, if someone had cranberries on their salad, the nutritionist and I debated whether or not it would be considered a food with high added sugar. Based on this decision, the overall meal score could change 10 points, which is quite significant. We decided that cranberries were a food with high added sugar, but kept track of these ambiguous foods and made sure that the same rules were applied consistently to all meals. Because a high HMI score is achieved with more food groups present, it could be possible that participants experiencing high arousal had higher HMI scores because they were variety-seeking, rather than health-seeking. Therefore, future research should replicate this study with a measurement of healthiness different from the HMI.

Another limitation is that in this study, the participants, did not need to prepare their meals. They simply selected food from the buffet at the dining hall. Healthier foods are generally more expensive, and they may require more effort to prepare (e.g. chopping vegetables to add to a dish). Therefore, the results may not be completely generalizable to people who need to shop for ingredients and cook their meals themselves. Therefore, future research should also observe or study adults who need to shop for and prepare their meals themselves.

A third limitation was the relatively low number of participants and observations, which may have made this study underpowered. The ideal number of participants was 150, but we were only able to recruit 102, and only 57 of them provided enough data to be included in the study. This lack of power may explain why there was only one marginally significant finding and why the interaction I had predicted was not significant. Therefore, future research should replicate this study with a larger number of participants.

In a world where obesity is becoming an increasingly prominent issue, it is important to understand the factors which influence our eating habits and food choices. We are constantly experiencing core affect and while we may not realize it, it is continuously influencing, not only the food choices we make, but many other decisions, such as whether or not to exercise. Therefore, the impacts core affect has on our daily lives, is an important matter to research and consider.

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