

**The Effects of Body Mass Index (BMI) and Eating on
Relationship Perceptions**

by

Michael Harvey

A thesis submitted to the Faculty of the University of Delaware in partial fulfillment of the requirements for the degree of Honors Bachelor of Arts in Psychology with Distinction

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ABSTRACT

Previous research provides evidence for the notion that low relationship quality is linked to poor health outcomes. Moreover, research suggests that eating habits, relationships, BMI, and health outcomes are inextricably linked. Specifically, evidence suggests that “comfort foods” can mitigate negative feelings of loneliness by satisfying the need to belong via learned associations between eating and relationships. The current study contributes to this line of research by examining how BMI and eating interact to predict peoples’ feelings about their close relationships in an experimental laboratory setting.

Participants, having fasted the night before, were randomly assigned to either drink an Ensure® Original nutritional shake or not and then asked to fill out a series of questionnaires. Consequently, around half of participants had not recently eaten at the time of the questionnaires (‘Did Not Recently Eat’ condition), whereas the other half had just recently eaten (‘Recently Ate’ condition). As hypothesized, the interaction between BMI and the eating manipulation predicted peoples’ relationship perceptions. Specifically, within the ‘Did Not Recently Eat’ condition, people with a higher BMI reported worse relationship quality than those with a lower BMI. However, this effect vanished among those who just consumed a shake: BMI and relationship quality

perceptions were unrelated in the ‘Recently Ate’ condition. Implications for learned associations, eating habits, and long-term health outcomes are discussed.

Chapter 1

INTRODUCTION

Relationships with friends, family, acquaintances, and even pets are integral parts of the human experience. Social psychologists have shown time and time again just how important relationships actually are for human wellbeing. For example, research has shown that we are happiest when with friends (Myers, 2000), we have innate biological systems attuned to social stimuli (Reis, Collins, & Berscheid, 2000), and social support predicts slower declines in cognitive functioning due to aging (Seeman, Lusignolo, Albert, & Berkman, 2001). Consistent with the empirical evidence, in their now classic article, Baumeister and Leary (2000) argue that the need to belong and form stable relationships with other people is a fundamental human desire and motivation, on par with obtaining food and shelter.

Relationships and Physical Health

A wealth of research supports the argument that relationship quality is strongly related to physical health. For example, research provides evidence that lower relationship quality and social isolation are significantly linked to an increased risk of mortality, independent of initial baseline health (House, Landis, and Umberson, 1998).

A review of the relationship quality-mortality link presents a plethora of evidence corroborating House et al.'s (1998) initial assessment (Holt-Lunstad, Smith, and Layton, 2010). The researchers even go as far as to suggest that leading health organizations develop interventions focused on improving relationship quality to combat poor health (Holt-Lunstad, Smith, and Layton, 2010).

Eating Habits and Relationships

As the relationship-physical health link became increasingly established, researchers began to ask and study the logical follow up questions: What are the mechanisms of action and potential mediators of the relationship-physical health link? How do health measures and behaviors, like BMI and eating habits, relate to this phenomenon?

Initial evidence suggests that learned associations between eating habits and relationships may play an important role (Troisi & Gabriel, 2011). Specifically, others have theorized that humans develop learned associations between eating and social connections as a result of the two being repeatedly associated throughout life (i.e. people often eat meals with close others). As a result, eating reminds people of their satisfying relationships with close others and the associated positive feelings of belonging. Thus, people may eat in order to satisfy the need to belong and form stable relationships (Troisi & Gabriel, 2011).

In support of this theoretical argument, people who had recently eaten “comfort foods” were more likely to form relationship-oriented words in a word completion task than people who had not recently eaten “comfort foods”, demonstrating cognitive associations between eating and relationships (Troisi & Gabriel, 2011). In addition, people who were asked to write about a fight with a close other (invoking belongingness threat cognitions) and then asked to write about comfort foods reported less feelings of loneliness than people who were asked to write about a fight with a close other and then write about trying new foods. This effect was moderated by attachment style such that the effect was only present for securely-attached individuals, i.e. people with positive cognitive associations with relationships (Troisi & Gabriel, 2011).

Evidently, poor eating habits like overeating (consuming more calories than one’s body regularly burns) can cause people to become overweight, which is a predictor of poor health outcomes. As mentioned previously, “emotional eating” (eating in response to interpersonal stressors in an effort to combat negative feelings via learned associations between eating and relationships) is one plausible pathway to overeating and subsequent poor health outcomes.

For example, certain people have strong learned associations between eating and their close relationships due to eating with their close others frequently (Troisi & Gabriel, 2011). Whenever these people suffer interpersonal stress and feel the associated negative emotions, they eat in order to mitigate their interpersonal stress. This emotional eating strategy works in the short-term because eating is so strongly

associated with their close relationships and the associated positive feelings; the need to belong is satiated. However, when people frequently eat in response to interpersonal stress, they run the risk of overeating. Therefore, emotional overeating presents itself as a conceivable step in the relationship quality to poor health outcomes pathway.

Body Mass Index (BMI), Eating Habits, and Relationships

Body Mass Index (BMI) is an important and widely used health measure; it is calculated by dividing a person's weight in kilograms by the square of his height in meters. It is easy to measure, considered a robust predictor of metabolic and disease outcomes, and used to classify humans as underweight ($BMI \leq 18.5$), healthy / normal weight (BMI between 18.5 and 24.9), overweight (BMI between 24.9 and 29.9), obese (BMI between 30 and 35), and severely obese ($BMI \geq 35$).

Previous research has shown that BMI is involved in the link between eating and relationships and is a robust predictor of relevant outcomes (Jaremka, Belury, Andridge, Lindgren, Habash, Malarkey, & Kiecolt-Glaser, 2016). This makes sense: higher BMI people eat differently and have more dysfunctional appetite-regulation hormone activity than lower BMI people do.

As mentioned above, emotional overeating in response to interpersonal stressors can lead a person to becoming overweight, which predicts poor long-term health outcomes. Thus, BMI is not only a robust predictor in the eating-relationships link, but may be a plausible outcome as well.

Current Study

The current study contributes to this line of research by examining how BMI and eating interact to predict peoples' feelings about their close relationships in an experimental laboratory setting. The study used an Ensure® Original nutritional shake in the eating manipulation in an effort to investigate if foods not commonly considered “comfort foods” could elicit any effects.

Participants, having fasted the night before, were randomly assigned to either drink an Ensure® Original nutritional shake or not and then asked to fill out a series of questionnaires. Afterward, participants' height and weight were recorded in order to calculate their BMI. On the basis of previous research, we hypothesized that BMI would moderate the link between eating conditions and relationship-oriented psychological variables such that higher BMI participants in the “Did Not Recently Eat” condition would perceive their relationships as worse than lower BMI participants in the same condition. However, this effect would vanish in the “Recently Ate” condition: both lower and higher BMI participants would score similarly in this condition.

If the results support the hypothesis, this study will provide further evidence for the notion that eating is inextricably linked to relationships. Moreover, as a logical extension of previous research (Jaremka, Belury, Malarkey, Glaser, Christian, Emery, & Kiecolt-Glaser, 2014; Troisi & Gabriel, 2011), it will present BMI as not only a

predictor in the eating-relationships link, but a plausible step in the relationship quality to poor health outcomes pathway.

Chapter 2

METHODS

Participants

This study included 89 students from the University of Delaware at Newark. Participants were recruited from Introductory Psychology and given research credit after completion of the study. Participants were first given a screening questionnaire that they filled out over the Internet on Qualtrics®, a computer-based survey application, prior to being scheduled for an appointment. The screening questionnaire consisted of questions regarding willingness to fast (participant must be willing to fast), diets (participants must not be on strict diets), smoking habits (participants must not be regular smokers), chronic medical conditions and medications (participants could not have substantial medical conditions or be on medications that might interfere with the study), and food allergies (participants could not be allergic to Ensure® Original nutritional shakes). These screening criteria were necessary to ensure internal validity. Certain diets, smoking habits, medical conditions, medications, and allergies could create aberrant eating habits and conditions; these outliers could unfairly and unusually skew the data, which could mask any important effects occurring. Demographic characteristics of the participants are provided in

Table 1. The sample was largely representative of the University of Delaware student body.

Procedure

Participants deemed eligible to participate were instructed to refrain from eating and drinking the night before their appointment beginning at 9:00 P.M. Participants were further instructed to refrain from eating and drinking, exercising, and brushing their teeth the morning of the appointment, which began at 9:00 A.M. for each participant. It was necessary to keep the fasting and appointment start times consistent for every participant because appetite-regulation hormones like ghrelin and leptin are sensitive to how recently one last ate. It was necessary to make sure all participants were approximately equally hungry across conditions at the start of the study; this helps strengthen the internal validity of the study.

After arriving to the lab, each of the 89 participants were randomly assigned to either the “Did Not Recently Eat” or “Recently Ate” conditions. In the “Recently Ate” condition, participants were given an Ensure® Original nutritional shake approximately fifteen to twenty minutes after arriving to the appointment. Ensure® Original nutritional shakes are gluten free, suitable for lactose-intolerant people, and have 220 calories, 9 grams of protein, and an assortment of healthy vitamins and minerals. Participants in the “Did Not Recently Eat” condition did not receive the Ensure® Original nutritional shake and instead were asked to sit in a room and peruse

magazines for the five-minute period. Participants were then asked to complete a series of questionnaires. These questionnaires consisted of measures of relationship-oriented variables, like emotional support and social isolation, and non-relationship-oriented variables, like current mood and depression. After completion of these questionnaires, participants in both the “Did Not Recently Eat” and “Recently Ate” conditions were weighed and their heights recorded to later calculate their Body Mass Indexes (BMIs). Participants were then debriefed and given research credit for Introductory Psychology.

Measures

As mentioned above, participants in both conditions completed an identical series of questionnaires some of which consisted of measures of relationship-oriented variables and others that consisted of measures of non-relationship-oriented variables.

Relationship-Oriented Scales

The relationship-oriented scales are as follows: Patient Reported Outcomes Measurement Information System – Emotional Support (PROMISES), Patient Reported Outcomes Measurement Information System – Informational Support (PROMISIS), Patient Reported Outcomes Measurement Information System – Social Isolation (PROMISSI), and Patient Reported Outcomes Measurement Information

System – Companionship (PROMISC). Each of these measures was on a 1-5 scale where 1 = never; 2 = rarely; 3 = sometimes; 4 = usually; and 5 = always.

Patient Reported Outcomes Measurement Information System (PROMIS) are measures built and validated by the National Institute of Health (NIH). By using both qualitative and quantitative research and psychometrics, these measures were subject to rigid testing guidelines and procedures (Cella et al., 2010).

The Patient Reported Outcomes Measurement Information System – Emotional Support (PROMISES) [Short Form 8a] is an 8-item scale designed to measure participants' feelings pertaining to their access to emotional support in their relationships. Sample items include “I have someone who will listen to me when I need to talk”; “I have someone who makes me feel appreciated”; and “I have someone with whom to share my most private worries and fears”. This scale was administered once during the study, after the eating manipulation.

The Patient Reported Outcomes Measurement Information System – Informational Support (PROMISIS) [Short Form 8a] is an 8-item scale designed to measure participants' feelings pertaining to their access to informational support in their relationships. Sample items include “I have someone to give me good advice about a crisis if I need it”; “I have someone to give me information if I need it”; and “I have people I can turn to for help with my problems”. This scale was administered once during the study, after the eating manipulation.

The Patient Reported Outcomes Measurement Information System – Social Isolation (PROMISSI) [Short Form 8a] is an 8-item scale designed to measure

participants' feelings of social isolation in their lives. Sample items include "I feel left out"; "I feel that people barely know me"; and "I feel detached from other people".

This scale was administered once during the study, after the eating manipulation.

The Patient Reported Outcomes Measurement Information System – Companionship (PROMISC) is a 6-item scale designed to measure participants' feelings of companionship in their lives. Sample items include "Do you have someone with whom to have fun?"; "Can you find companionship when you want it?"; and "Do you have someone to go with you to an event?". This scale was administered once during the study, after the eating manipulation.

Non-Relationship-Oriented Scales

The non-relationship-oriented scales are as follows: the Center for Epidemiologic Studies Depression Scale Revised (CESD-R), the Self-Assessment Manikin scale (MANIKIN), and a hunger questions scale.

The Center for Epidemiologic Studies Depression Scale Revised (CESD-R) is a 20-item scale that is designed to measure participants' recent depressing feelings. The measure asks participants to indicate how many times in the past week they felt a particular way; the scale was on a 0-3 scale where 0 = rarely or none of the time [less than 1 day]; 1 = some or a little of the time [1-2 days]; 2 = occasionally or a moderate amount of time [3-4 days]; and 3 = most or all of the time [5-7 days]. Sample items include "I was bothered by things that usually don't bother me"; "I felt depressed"; "I

felt lonely”; and “I felt that everything I did was an effort”. This scale was administered once during the study, after the eating manipulation.

The Self-Assessment Manikin scale (MANIKIN) is a scale that is designed to measure participants’ current moods. The measure is on a 1-9 scale, consists of three sets of nine humanlike figures, and asks participants to indicate which of the nine figures in each set best represents their current mood. For example, the first set has a heavily frowning humanlike figure (1) positioned all the way to the left, a slightly frowning humanlike figure (3), a neutral-expression humanlike figure (5) positioned in the middle, a smiling humanlike figure (7), and a widely smiling humanlike figure (9) positioned all the way to the right. The heavily frowning humanlike figure (1) is described as “unhappy, annoyed, unsatisfied, and bored” while the widely smiling humanlike figure (9) is described as “happy, pleased, satisfied, and hopeful”. The two other sets of humanlike figures are similar: the left-most humanlike figure (1) in the second set has his eyes closed and is described as “relaxed, calm, sleepy, and sluggish” while his right-most counterpart (9) looks energetic and is described as “excited, frenzied, wide-awake, and aroused”. In the third set, the left-most humanlike figure (1) is small and short and described as “submissive, influenced, and controlled by others” while the right-most humanlike figure (9) is big and tall and described as “in control, important, dominant, and autonomous”.

Self-reported hunger was measured with a scale that was based on and modeled after previous research (Flint, Raben, Blundell, & Astrup, 2000). The scale consisted of four items, all of which were on a 1-5 scale. The first three items were:

“How hungry are you?”, “How strong is your desire to eat?”, and “How full do you feel?” (reverse-scored). These three items were scaled as follows: 1 = very slightly or not at all; 2 = a little; 3 = moderately; 4 = quite a bit; and 5 = extremely. The fourth item, “How much of an appetite do you have?”, was scaled as follows: 1 = I don’t have an appetite; 2 = I have a very small appetite; 3 = I have a very moderate appetite; 4 = I have a somewhat big appetite; and 5 = I have an extremely big appetite. The hunger scale was administered once during the study, after the eating manipulation.

Chapter 3

RESULTS

Data Analytic Strategy

In preliminary data preparation, the data were checked for normality and the presence of outliers; participants whose values were more than four standard deviations from the sample mean would have been dropped from the subsequent analyses. However, none of the participants met the criteria and thus were not dropped. BMI was grand mean-centered for all analyses in order to redefine the '0' point and make the intercept more meaningful.

The current study investigated whether the combination of eating condition and BMI predicted peoples' feelings about their close relationships via a multiple regression analysis. Specifically, the analysis separately tested whether the main effect of eating condition (categorical; 'Did Not Recently Eat' versus 'Recently Ate'), the main effect of BMI (continuous), and the two-way eating condition by BMI interaction predicted feelings of emotional support, informational support, social isolation, companionship, depression, current mood, and hunger.

Significant or marginally significant two-way eating condition by BMI interactions were decomposed in the following way: simple slopes tests examined the effect of BMI (computed at +/- 1 standard deviation (3.65) from the mean,

corresponding to 19.9 and 27.2 for lower and higher BMI, respectively) for people in the ‘Did Not Recently Eat’ condition or the ‘Recently Ate’ condition. For the simple slopes tests, we alternated the coding for the ‘Recently Ate’ and ‘Did Not Recently Eat’ conditions (i.e. 0 = ‘Recently Ate, 1 = ‘Did Not Recently Eat’; 0 = ‘Did Not Recently Eat’, 1 = ‘Recently Ate’) depending on the particular simple slopes test we were interested in. Results are reported in Figures 1-6 and Table 2.

Relationship-Oriented Variables Results

Emotional Support. The interactive link between BMI and eating condition significantly predicted emotional support scores, $B = 0.093$, $t(87) = 2.189$, $p < .031$ (see Table 2). Follow-up tests indicated that in the ‘Did Not Recently Eat’ condition, higher BMI participants scored significantly lower emotional support than their lower BMI counterparts, i.e. higher BMI participants perceived less emotional support in their close relationships than lower BMI participants did when they had not recently eaten, $B = -0.070$, $t(87) = -2.652$, $p < .01$ (see Figure 1). However, in the ‘Recently Ate’ condition, these differences vanished: the higher and lower BMI participants scored nearly identically, i.e. both higher and lower BMI participants perceived about the same amount of emotional support in their close relationships when they had recently eaten, $B = 0.023$, $t(87) = 0.694$, $p = .489$ (see Figure 1).

Informational Support. The interactive link between BMI and eating condition predicted informational support scores, $B = 0.083$, $t(87) = 1.828$, $p = .071$, although

this effect was marginal (see Table 2). Follow-up tests indicated that in the ‘Did Not Recently Eat’ condition, higher BMI participants scored significantly lower informational support than their lower BMI counterparts, i.e. higher BMI participants perceived less informational support in their close relationships than lower BMI participants did when they had not recently eaten, $B = -0.065$, $t(87) = -2.318$, $p < .023$ (see Figure 2). However, in the ‘Recently Ate’ condition, these differences vanished: the higher and lower BMI participants perceived about the same amount of informational support in their close relationships when they had recently eaten, $B = 0.018$, $t(87) = 0.498$, $p = .62$ (see Figure 2).

Social Isolation. The interactive link between BMI and eating condition predicted social isolation scores, $B = -0.066$, $t(87) = -1.708$, $p = .091$, although this effect was marginal (see Table 2). Follow-up tests indicated that in the ‘Did Not Recently Eat’ condition, higher BMI participants scored significantly higher social isolation than their lower BMI counterparts, i.e. higher BMI participants perceived themselves as more socially isolated in their lives than lower BMI participants did when they had not recently eaten, $B = 0.056$, $t(87) = 2.335$, $p < .022$ (see Figure 3). However, in the ‘Recently Ate’ condition, these differences vanished: the higher and lower BMI participants perceived themselves as about equally socially isolated in their lives when they had recently eaten, $B = -0.01$, $t(87) = -0.332$, $p = .74$ (see Figure 3).

Companionship. The interactive link between BMI and eating condition was a non-significant predictor of companionship scores, i.e. in the ‘Did Not Recently Eat’ condition, both lower and higher BMI participants perceived about equal amounts of

companionship in their close relationships, and in the ‘Recently Ate’ condition, both lower and higher BMI participants perceived about equal amounts of companionship in their close relationships, $p = .841$ (see Table 2).

Non-Relationship-Oriented Variables Results

Depression. The interactive link between BMI and eating condition was a non-significant predictor of depression scores, i.e. in the ‘Did Not Recently Eat’ condition, both lower and higher BMI participants perceived themselves as about equally depressed, and in the ‘Recently Ate’ condition, both lower and higher BMI participants perceived themselves as about equally depressed, $p = .164$ (see Table 2 and Figure 4).

Current Mood. The interactive link between BMI and eating condition was a non-significant predictor of current mood scores, i.e. in the ‘Did Not Recently Eat’ condition, both lower and higher BMI participants were in similar moods, and in the ‘Recently Ate’ condition, both lower and higher BMI participants were in similar moods, $p = .783$ (see Table 2 and Figure 5).

Hunger. The interactive link between BMI and eating condition was a non-significant predictor of hunger scores, i.e. in the ‘Did Not Recently Eat’ condition, both lower and higher BMI participants felt the same amount of hunger, and in the ‘Recently Ate’ condition, both lower and higher BMI participants felt the same amount of hunger, $p = .657$ (see Table 2 and Figure 6).

Gender

Further analyses revealed that when gender is added to the analyses, the BMI by eating condition by gender interaction is non-significant for all seven dependent variables measured, all p values $> .24$, demonstrating that the two-way BMI by eating condition interaction results were consistent for men and women (results not shown in figures or tables).

Table 1 Study Sample Characteristics

Characteristic	Categories	Entire Sample
		Number (%) or M (SD)
Race	White	56 (63)
	Black	26 (29)
	Other	7 (8)
Gender	Female	52 (58)
	Male	37 (42)
BMI (kg/m ²)	Underweight (≤ 18.00)	3 (3)
	Normal weight (18.00-24.99)	60 (67)
	Overweight (25.00-29.99)	21 (24)
	Obese (≥ 30.00)	5 (6)
BMI (kg/m ²)	N/A	23.55 (3.65)
Age, years	N/A	18.99 (1.27)

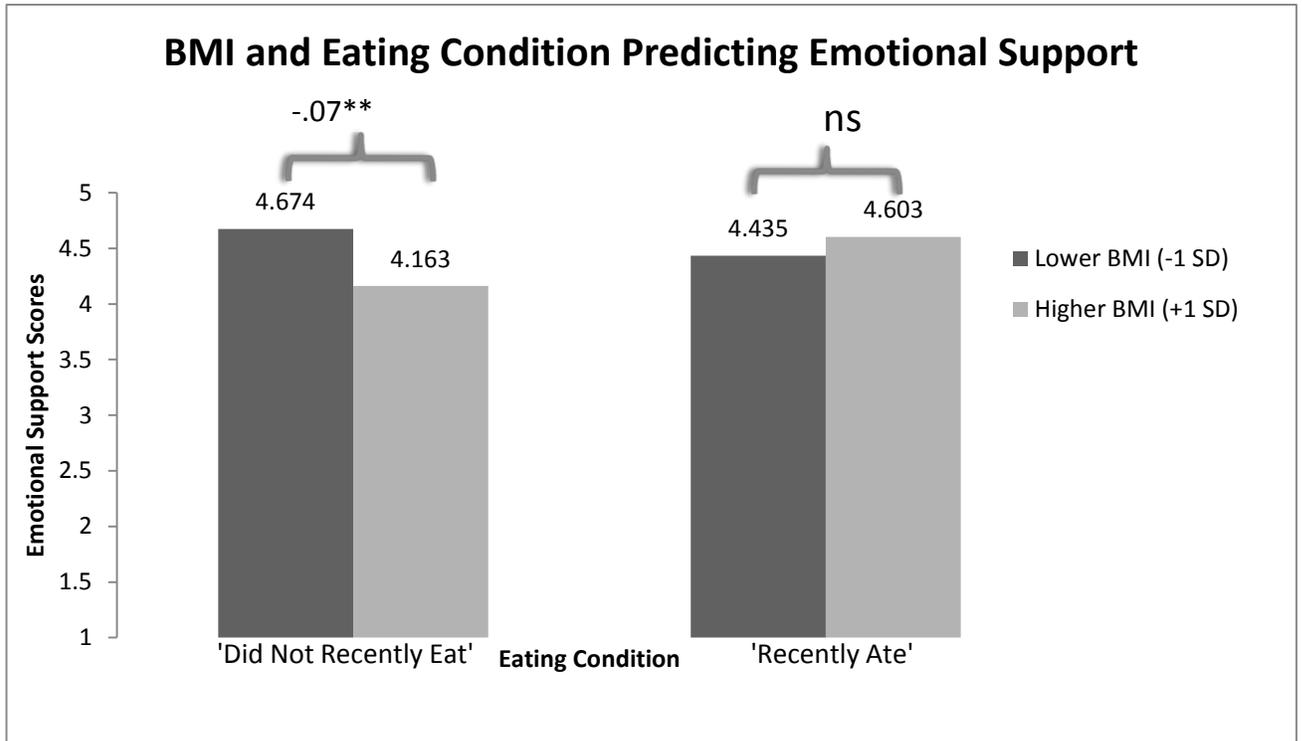
Note: Percentage reflect the proportion of participants within their respective group.

Table 2 Summary of the Unadjusted Models With Eating Condition by BMI Interaction Predicting Each Outcome

Outcome	Predictor: Eating condition by BMI interaction		
	<i>B</i>	<i>t (df)</i>	<i>p</i>
Emotional Support (PROMISES)	.093	2.189 (85)	.031
Informational Support (PROMISIS)	.083	1.828 (85)	.071
Social Isolation (PROMISSI)	-.066	-1.708 (85)	.091
Companionship (PROMISC)	.007	.201 (85)	.841
Depression (CESD)	-.04	-1.403 (85)	.164
Current Mood (MANIKIN)	-.021	-.276 (85)	.783
Hunger (HUNGER)	-.023	-.445 (85)	.657

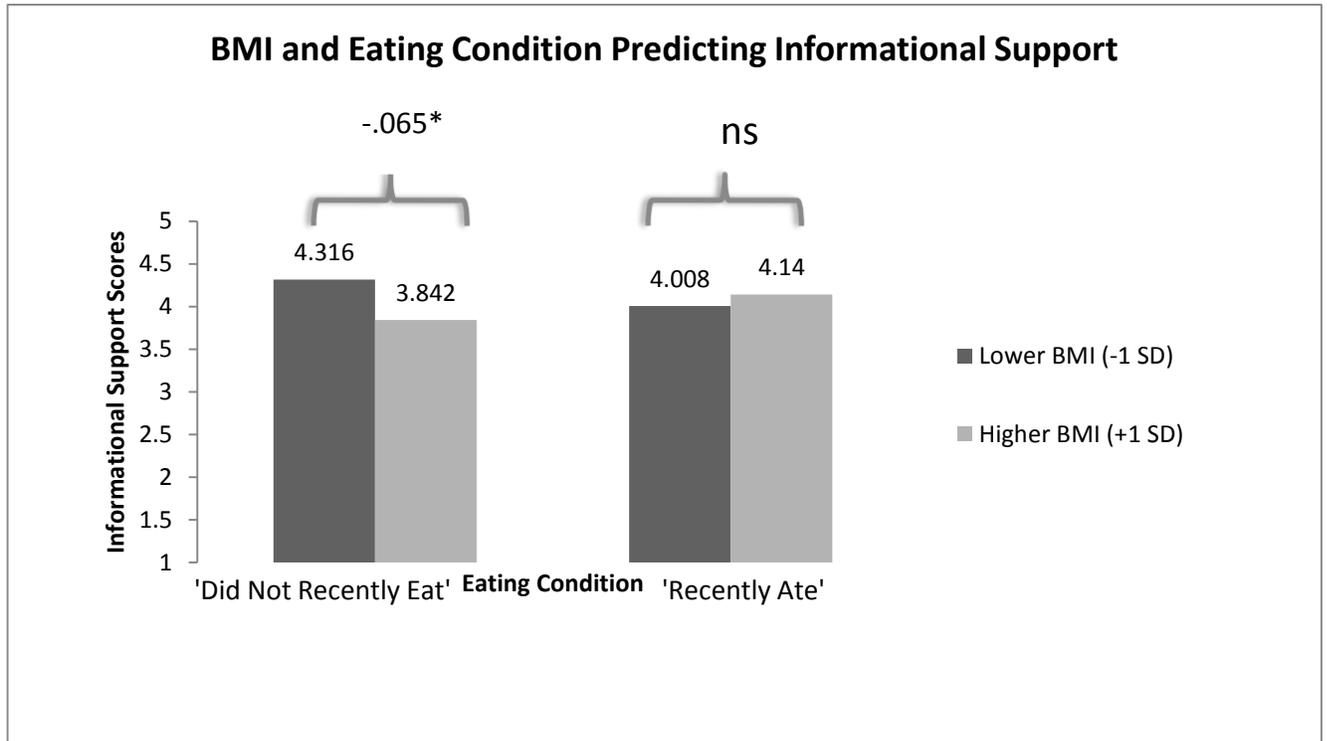
Note: These analyses reflect the unadjusted models reported in the primary analyses.

Figure 1 BMI by Eating Condition Interaction Predicting Emotional Support (Relationship-Oriented) [N = 89]



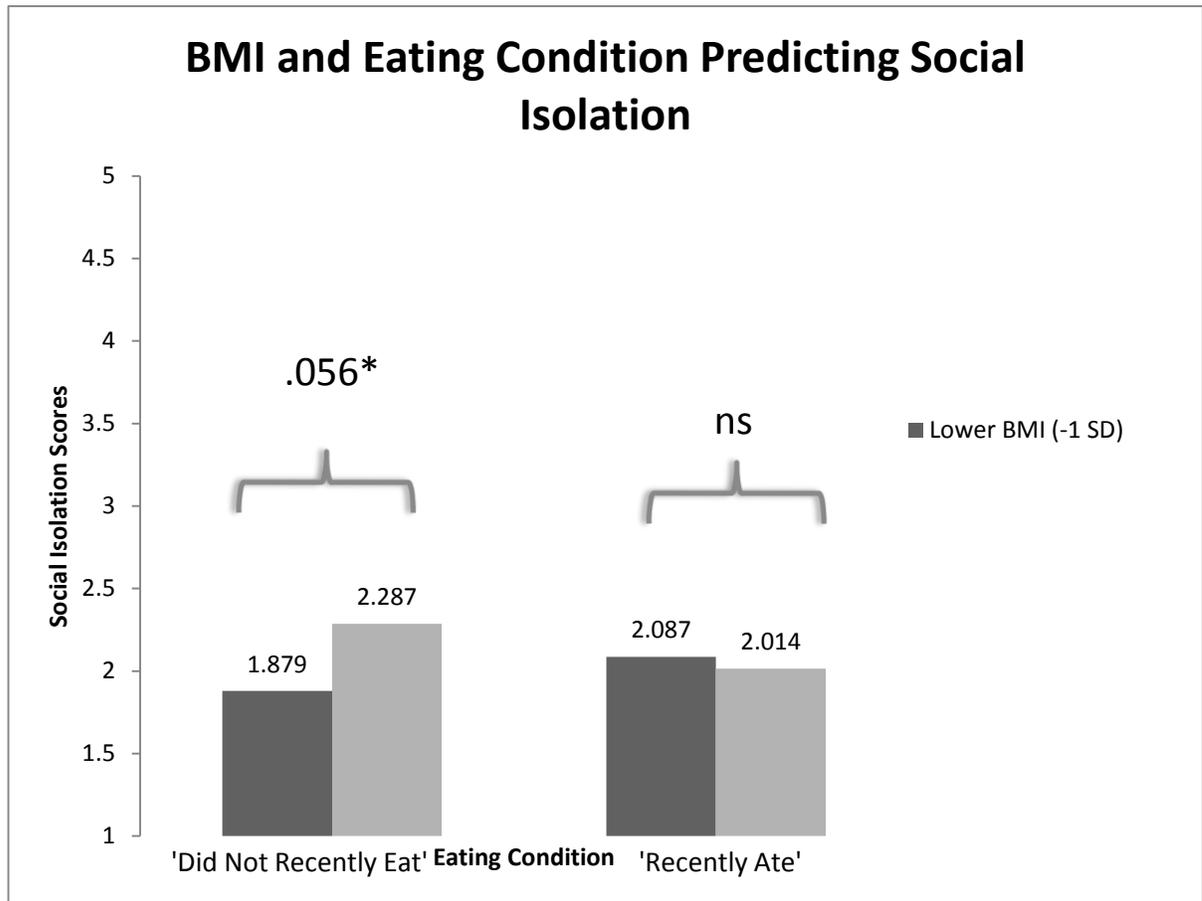
Note: $-.07$ refers to a Beta coefficient (simple slopes test); ** and ns refer to p values (simple slopes test).

Figure 2 BMI by Eating Condition Interaction Predicting Informational Support (Relationship-Oriented) [N = 89]



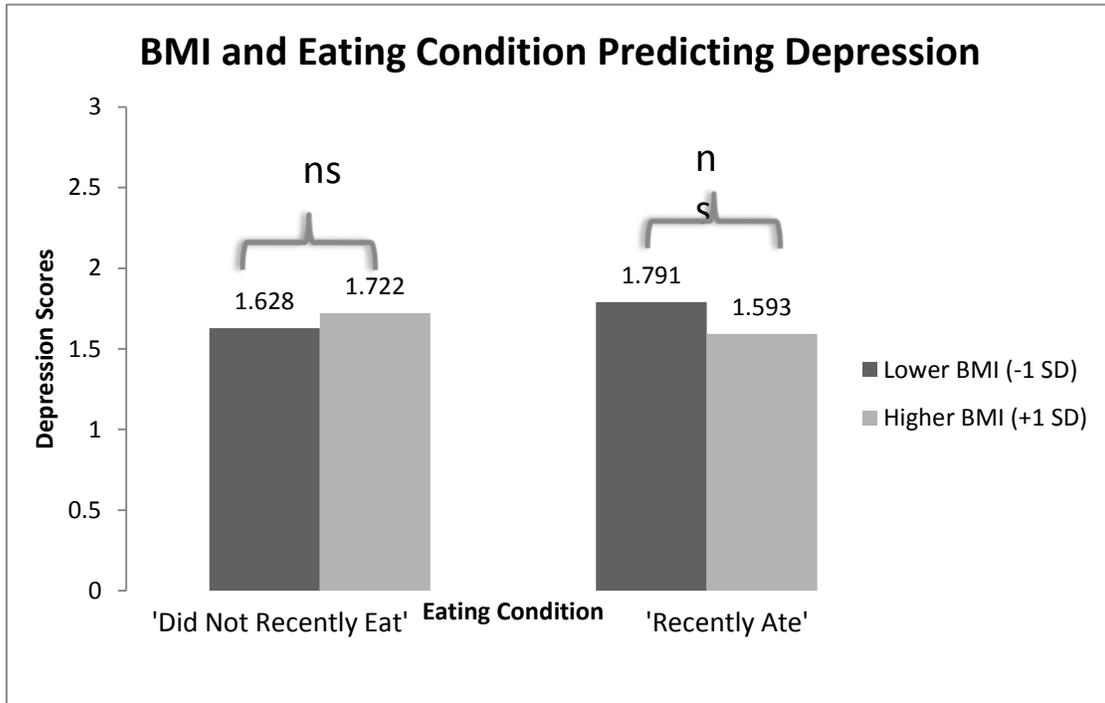
Note: '-.065' refers to a Beta coefficient (simple slopes test); '*' and 'ns' refer to *p* values (simple slopes test).

Figure 3 BMI by Eating Condition Interaction Predicting Social Isolation (Relationship-Oriented) [N = 89]



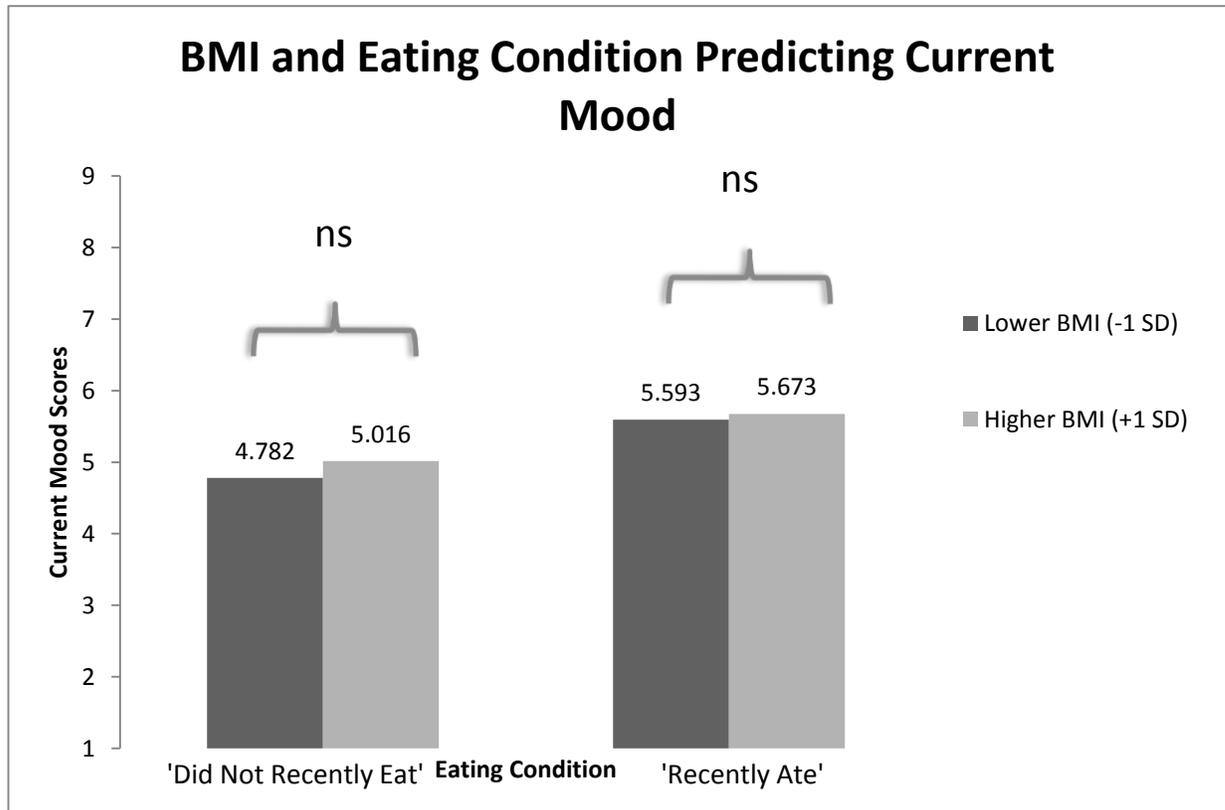
Note: '.056' refers to a Beta coefficient (simple slopes test); '*' and 'ns' refer to p values (simple slopes test).

Figure 4 BMI by Eating Condition Interaction Predicting Depression (Non-Relationship-Oriented) [N = 89]



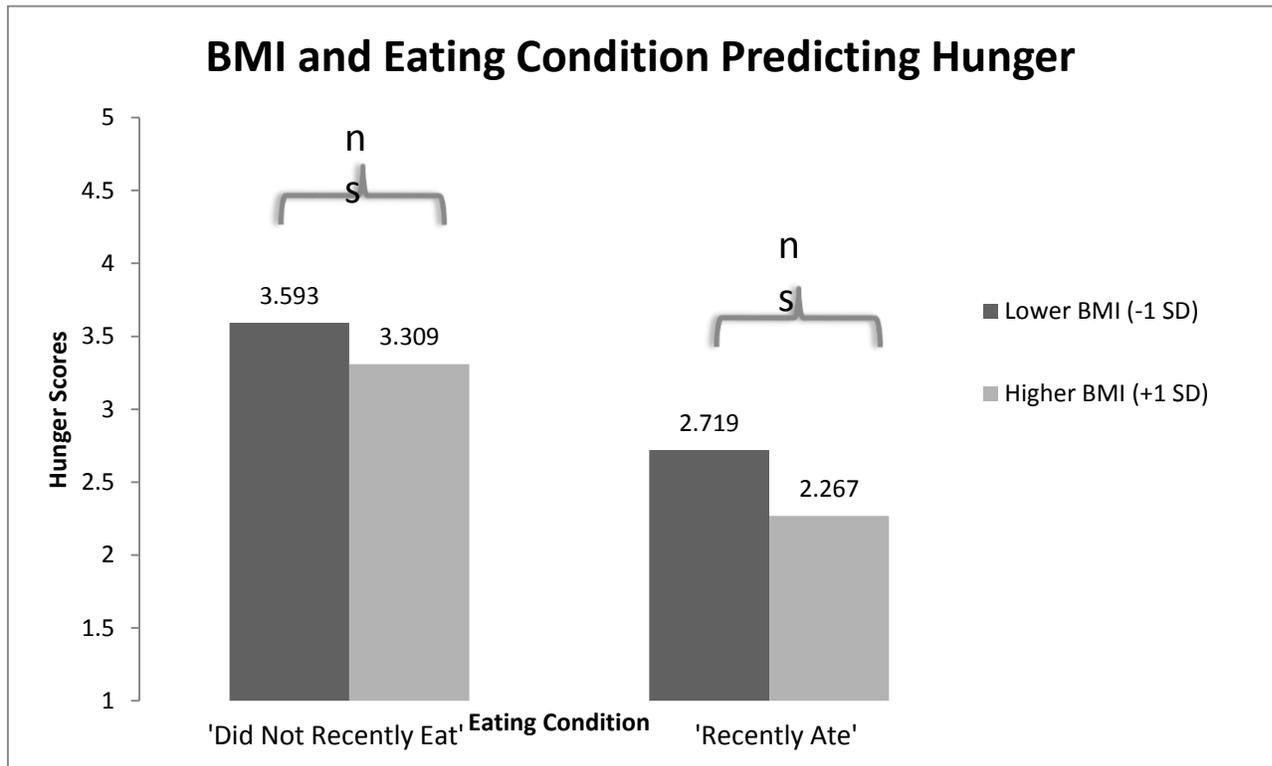
Note: 'ns' refers to p values (simple slopes test).

Figure 5 BMI by Eating Condition Interaction Predicting Current Mood (Non-Relationship-Oriented) [N = 89]



Note: 'ns' refers to p values (simple slopes test).

Figure 6 BMI by Eating Condition Interaction Predicting Hunger (Non-Relationship-Oriented) [N = 89]



Note: 'ns' refers to p values (simple slopes test).

Chapter 4

DISCUSSION

In the current study, the results indicate that BMI moderates the effects of eating on peoples' perceptions of their close relationships. Specifically, when participants had not recently eaten ('Did Not Recently Eat' condition), higher BMI participants felt less socially connected than lower BMI participants did. However, this effect was attenuated when participants had recently eaten ('Recently Ate' condition): both lower and higher BMI participants felt equally socially connected. The current study warrants a causal claim: not having recently eaten causes worse relationship perceptions for higher BMI people.

The current study does not provide direct evidence for any other claims. However, when the current study is taken in conjunction with Jaremka et al. (2014) and Troisi & Gabriel's (2011) recent research, the plausibility of a larger, more complex theoretical framework emerges. Specifically, the current study provides evidence for the notion that eating can cause relationship perceptions. Moreover, other research suggests that relationship perceptions can cause emotional overeating (Troisi & Gabriel, 2011). It is plausible that emotional overeating can cause increased BMI, which can lead to poor long-term health outcomes. Thus, it is plausible that increased BMI could possibly partially mediate the link between relationship quality and long-term health outcomes.

As a theoretical illustrative example: certain people have strong learned associations between eating and their close relationships due to eating with their close others frequently (Troisi & Gabriel, 2011). Whenever these people suffer interpersonal stress and feel the associated negative emotions, they eat in order to mitigate their interpersonal stress. This emotional eating strategy works in the short-term because eating is so strongly associated with their close relationships and the associated positive feelings; the need to belong is satiated. However, when people frequently eat in response to interpersonal stress, they run the risk of overeating. Overeating subsequently increases people's BMIs, which leads to poor long-term health outcomes. Overall, people with frequent interpersonal stress (poor relationship quality) who respond to said stress with unhealthy eating habits (emotional overeating) have poorer health outcomes via increased BMIs. Thus, increased BMI is a plausible partial mediator of the relationship quality – health outcomes link.

To be perfectly clear, there is no direct evidence for the validity of the entire pathway as described above. While there is direct evidence for specific steps in the pathway (i.e. eating causes relationship perceptions), the suggested pathway remains plausible at best.

The notion that eating causes relationship perceptions is severely undervalued in much of the close relationships literature. Most close relationships research does not even account for participants' eating habits, when they last ate, etc. even though there is substantial evidence to suggest these variables strongly factor into relationship perceptions.

Critics might hastily perceive our conclusions as too specific to social outcomes. After all, it is possible that participants who had not recently eaten might just be in generally worse moods, hungrier, more depressed, or otherwise feeling worse about things in general, not just worse about their relationships compared to participants who had recently eaten. However, importantly, the experimental design of the study and the assessment of multiple psychological variables allow the ruling out of a number of possible alternative explanations. The interactive effect is present even though depression, current mood, and hunger levels did not differ significantly between the two BMI groups in the ‘Did Not Recently Eat’ condition or between the two BMI groups in the ‘Recently Ate’ condition. Thus, it is logical to conclude that the interactive effects in the study are specific to relationship outcomes: an essential point to note and one that is not necessarily intuitive. Clearly, the eating-relationships link is not just a byproduct of a more general phenomena (i.e. eating puts people in better moods), but a potent construct in and of itself.

Future Directions

The current study provides multiple avenues for future research. For instance, future research can seek to understand why certain people emotionally overeat while others do not. Is it mainly due to differences in relationship quality? Differences in the strength of learned associations between eating and relationships? Differences in the availability of different, “healthier” methods for interpersonal stress reduction? This

information would help in better identifying who is at risk for emotional overeating and what steps could be taken to mitigate the bad habits and their poor health outcomes.

Moreover, what constitutes emotional overeating? What kinds of foods are people most likely to emotionally overeat? When is emotional overeating most likely to occur? Again, this information would help in better identifying risk factors for and red flags of emotional overeating.

Furthermore, how effective could possible interventions for emotional overeating be? Perhaps nutritionists and doctors could more effectively treat overweight and obese patients by having them be mindful of their emotional overeating. Being mindful of bad habits is the first step toward changing said habits.

Limitations

As in all studies, the current study has several limitations. First, the sample consists solely of college students from the University of Delaware; further studies with more diverse samples must be run to test for external validity. Second, only self-reported measures in a laboratory setting were used; future research would do well to use physiological measures to supplement the self-reported measures.

Chapter 5

CONCLUSION

Everyone has suffered significant interpersonal stress throughout his life. For many of us, it is easy and natural to reach for a tub of ice cream after a bad breakup or inhale an entire sleeve of Oreos after a fight with a close friend. The current research suggests that these all-too-common behaviors are more complex than they may initially seem: emotional overeating satiates not only one's sweet tooth, but the need to belong as well. Sating the need for satisfying relationships by emotional overeating can be effective in the short-term, but can have dire consequences, like increased BMI and poor health, in the long-term. By adding this interpersonal dimension to the health framework, the current research offers a critical avenue for designing more effective interventions for overweight and obese people trying to change their bad eating habits, lose weight, and get healthier.

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