

# Are Intuitive Eating and Eating Disorder Symptomatology Opposite Poles of the Same Construct?

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Two studies explored whether intuitive eating (i.e., eating based on physiological hunger and satiety cues rather than situational and emotional cues) is a distinct construct from low levels of eating disorder (ED) symptomatology among college women. Previous research has demonstrated that high levels of ED symptomatology are related to lower levels of well-being. Therefore, if intuitive eating is a distinct construct, then it should be associated with indices of well-being above and beyond the variance accounted for by ED symptomatology. Findings revealed that two intuitive eating components (i.e., eating for physical rather than emotional reasons and reliance on internal hunger and satiety cues) made unique contributions to each well-being measure, whereas the remaining intuitive eating component (i.e., unconditional permission to eat) overlapped substantially with low levels of ED symptomatology.

*Keywords:* intuitive eating, well-being, eating disorders, college women

Many scholars (e.g., Seligman & Csikszentmihalyi, 2000) have emphasized the need to define psychological well-being as the affirmative presence of strengths rather than the mere absence of symptoms. Indeed, it is important to measure mental health in positive terms because flourishing contrasts not only with pathology but also languishing, a disorder intermediate on the mental health continuum in which people report feeling “empty” or “hollow” (Fredrickson & Losada, 2005, p. 678). It also has been suggested that strengths are not necessarily inferred from the absence of pathology (Striegel-Moore & Cachelin, 1999). According to studies on the structure of affect, positive affect does not appear to be the opposite pole of a single dimension anchored at the other end by negative affect (e.g., Watson, Clark, & Tellegen, 1988). Conceptualizing well-being in terms of adaptive personality characteristics and behaviors historically has been a tenet of counseling psychology (Lopez et al., 2006). As a result, counseling psychologists have incorporated various positive attributes (e.g., positive emotions, optimism, coping, creativity, self-esteem, self-efficacy) within their research and promoted these characteristics within their clients (Lopez & Snyder, 2003).

Yet, in their study of eating behaviors, counseling psychologists traditionally have focused more on understanding eating disorder (ED) symptomatology than on adaptive eating practices (Tylka, 2006). Some counseling psychologists have addressed adaptive eating behaviors as part of the ED continuum framework (e.g., Mintz & Betz, 1988; Tylka & Subich, 1999, 2003, 2004); however, adaptive eating in this context is defined merely as the absence of ED symptoms. Given their focus on hygiene, it would behoove counseling psychologists to more clearly articulate adaptive eating and determine whether it is solely the lack of ED symptomatology

or whether it contains unique components that are not captured in the ED continuum framework. The identification of such unique components may initiate a quest to understand how to best foster and maintain adaptive eating along with how to prevent and treat disordered eating (i.e., these efforts should result in an increase in adaptive eating behaviors alongside a reduction in maladaptive symptoms; Tylka, 2006).

According to the ED continuum framework, adaptive eating should reflect the absence of characteristics associated with clinical EDs (e.g., preoccupation with food, binge eating, dietary restriction). However, individuals can have low levels of ED symptomatology without eating adaptively. For instance, they may habitually eat in the absence of hunger, but not an amount large enough to be considered a binge, or eat everything on their plate without regard to their satiety level. Moreover, individuals with EDs often use emotional and situational cues to guide their eating behaviors, whereas individuals who eat adaptively often use different cues (i.e., based on physiological hunger and satiety) to direct when, how much, and what they eat (Tribole & Resch, 1995). As a result, adaptive eating may be negatively related to, but not solely defined by, the absence of ED symptoms.

An adaptive form of eating that has recently gained recognition is intuitive eating, which is defined as a strong connection with, understanding of, and eating in response to internal physiological hunger and satiety cues as well as low preoccupation with food (Tribole & Resch, 1995). Three central and interrelated components of intuitive eating have been identified: (a) unconditional permission to eat when hungry and what food is desired, (b) eating for physical rather than emotional reasons, and (c) reliance on internal hunger and satiety cues to determine when and how much to eat (Tylka, 2006).

Individuals who give themselves unconditional permission to eat do not try to ignore their hunger signals nor do they classify food into acceptable and nonacceptable categories and try to avoid food in the latter category (Tribole & Resch, 1995). They are aware of how their body responds to certain foods; thus, they

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typically choose foods that help their bodies function well and view taste as only one component of food choice. Researchers have found that people who give themselves unconditional permission to eat do not overindulge in food or engage in binge eating, whereas people who place conditions on when, how much, and what foods they can eat (i.e., by restricting the timing, amount, and type of food eaten according to some external standard) often overindulge in food when they perceive that their dietary rules have been broken and therefore become preoccupied with food (Faith, Scanlon, Birch, Francis, & Sherry, 2004; Herman & Polivy, 1983; Polivy & Herman, 1999).

Eating for physical rather than emotional reasons reflects the tendency to eat to satisfy a physical hunger drive rather than to cope with emotional fluctuations and/or distress (Tribole & Resch, 1995). When physically hungry, individuals who engage in intuitive eating will eat to escape this hunger and will stop eating when indifferent or slightly sated (Herman & Polivy, 1983). Individuals who adopt this eating style often eat less when they are anxious or stressed, perhaps because of the appetite-suppressing sympathomimetic effects of these emotions (Herman, Polivy, Lank, & Heatherton, 1987). In contrast, people who engage in dietary restraint often eat more and in a disinhibited fashion when they experience emotional fluctuations and agitation, especially when they perceive that they have breached their diet (Herman et al., 1987).

Reliance on internal hunger and satiety cues indicates an awareness of physiological hunger and satiety signals and the inclination to trust these signals to guide eating behavior (Carper, Fisher, & Birch, 2000; Tribole & Resch, 1995). Awareness of internal experiences is believed to be both innate and an aspect central to well-being; however, this awareness is often stifled when people set and follow rules (i.e., proscribing when, what, and how much to eat) that are based on societal promises that dietary restraint will lead to weight loss and overall improvement in life (Rogers, 1964; Tribole & Resch, 1995). Replacing innate internal hunger and satiety signals with external rules leads to a disconnection from internal experience and an innate ability to regulate food intake, which has been shown to be related to dietary restraint, weight gain, and eating in the absence of hunger and in response to emotional and situational factors (Birch & Fisher, 2000; Birch, Fisher, & Davison, 2003).

Each of these three intuitive eating components has been found to be moderately to strongly related in a negative direction to ED symptomatology and moderately related in a positive direction to psychological well-being (Tylka, 2006). Yet, it remains to be determined whether the components of intuitive eating merely reflect the absence of ED symptomatology or whether they are distinct constructs. Much research has supported the link between ED symptomatology and negative psychological well-being among college women (e.g., Kitsantas, Gilligan, & Kamata, 2003; Tylka & Subich, 1999). If the components of intuitive eating are associated with psychological well-being above and beyond the variance in well-being accounted for by ED symptomatology, then support for their uniqueness will be accrued. If the distinctiveness of these components is demonstrated, it would benefit psychologists to assess intuitive eating along with ED symptomatology in order to gain a more comprehensive understanding of their clients' and research participants' eating behaviors.

Therefore, in two studies, we tested whether intuitive eating is distinct from ED symptomatology. To be consistent with the aim of counseling psychology, we conceptualized psychological well-being as the presence of several adaptive psychological resources rather than the absence of pathology. Given the vast number of psychological resources identified within the literature (i.e., Lightsey, 1996; Lopez et al., 2006; Peterson & Seligman, 2004), we selected seven of these resources that have particular theoretical relevance to eating behavior (e.g., positive affect, self-esteem, proactive coping, optimism, hardiness, unconditional self-regard, and social problem solving) to serve as the representative constructs of psychological well-being.

## Study 1

Positive affect, self-esteem, and proactive coping have been identified as adaptive psychological resources (Lopez et al., 2006) that are related to eating behavior. Yet, it remains to be determined whether intuitive eating predicts these psychological resources after considering the contribution made by ED symptomatology. A rationale for why we chose to examine the unique contribution of intuitive eating to these indices of psychological well-being is presented next.

### *Positive Affect*

Positive affect represents the pleasant end of valenced emotional states, which include feeling upbeat, happy, appreciative, and grateful (Fredrickson & Losada, 2005). Much empirical evidence supports the adaptiveness of positive affect (for a review, see Lyubomirsky, King, & Diener, 2005), as positive affect is related to intuition (Bolte, Goschkey, & Kuhl, 2003), happiness (Fredrickson & Joiner, 2002), and numerous physical health benefits such as lower cortisol levels and reduced inflammatory responses to stress (Steptoe, Wardle, & Marmot, 2005). Positive affect also has been shown to predict future levels of health and well-being, as the effects of positive affect accumulate and compound over time making people healthier, more socially integrated, knowledgeable, effective, and resilient (Fredrickson, 2001). When investigating the link between positive affect and eating behaviors within a mixed sample of women with and without EDs, women with EDs have been found to have lower levels of positive affect than women without EDs (Podar, Hannus, & Allik, 1999). No study has determined the relationship of positive affect to intuitive eating.

### *Self-Esteem*

Self-esteem is the evaluative aspect of the self-concept that corresponds to an overall view of the self as worthy or unworthy (Baumeister, 1998). Among college students, high self-esteem has been connected to many psychological benefits, such as life satisfaction, adaptive coping skills, psychological hardiness, optimism, and intuitive awareness (Betz & Campbell, 2003; Pelham et al., 2005; Tylka, 2006), whereas low self-esteem has been associated with depression, shyness, loneliness, and alienation (Heatherton & Wyland, 2003). Much research has supported the negative relationship of self-esteem to ED symptomatology among college women (e.g., Tylka & Subich, 2004), and low self-esteem was found to predict future levels of ED symptomatology (Zalta &

Keel, 2006). All three components of intuitive eating are positively related to self-esteem (Tylka, 2006).

### *Proactive Coping*

Proactive coping reflects efforts to build resources that facilitate promotion toward challenging goals and personal growth (Green-glass, Schwarzer, & Taubert, 1999; Schwarzer & Knoll, 2003). Specifically, people high in proactive coping do not appraise risks, demands, and opportunities as potential threats but rather perceive these demanding situations as personal challenges. These individuals initiate a constructive path of action and create opportunities for growth, strive for life improvement, and build resources that facilitate life meaning and purpose. Indeed, proactive coping has been found to be strongly related, in a positive direction, to life satisfaction and optimism (Tylka, 2006). When examining the association between coping and eating behaviors among college women, ED symptomatology was related to higher maladaptive emotion-oriented coping (Bittinger & Smith, 2003) and avoidant coping (Gorman, 1999), whereas intuitive eating was related to higher proactive coping (Tylka, 2006).

### *Hypotheses*

On the basis of the associations of intuition and awareness of bodily processes with positive affect, self-esteem, and proactive coping, we hypothesized that intuitive eating would be uniquely related to each index of psychological health after controlling for the negative contribution made by ED symptomatology. In terms of the components of intuitive eating, eating for physical rather than emotional reasons and reliance on internal hunger/satiety cues have been found to be only slightly to moderately related to ED symptomatology (Tylka, 2006); therefore, these components were expected to make unique contributions to the psychological well-being indices. However, because of the strong negative relationship between unconditional permission to eat and ED symptomatology (Tylka, 2006), this component was not believed to contribute uniquely to the well-being indices.

### *Method*

#### *Participants and Procedure*

We sampled college women because studies on intuitive eating have been conducted exclusively with these individuals, and researchers have yet to determine whether intuitive eating measures yield reliable and valid scores with other individuals. Our data set included 340 women from a large midwestern university who ranged in age from 17 to 30 years ( $M = 18.44$ ,  $SD = 1.02$ ). Women identified themselves as Caucasian American (85.9%), African American (5.3%), Asian American (5.0%), Latina (2.1%), and multiracial (1.8%). They represented 1st-year students (84.5%), sophomores (11.7%), juniors (2.1%), seniors (1.2%), and postbaccalaureate students (0.6%). Responses from 5 women who did not complete at least 90% of any given measure were not entered into the data set.

Women enrolled in introductory psychology courses volunteered to participate through the university psychology department's organized research program. The study was described as an investigation of the relation between eating habits and personality characteristics. After women were guaranteed anonymity and their informed consent was obtained, they completed the questionnaires in a classroom used as a research lab.

Participants received credit that was applied toward their class grade. The measures were counterbalanced to control for order effects.

### *Measures*

*Intuitive Eating Scale (IES; Tylka, 2006).* The IES is a 21-item instrument containing three subscales, which assess the components of intuitive eating: (a) Unconditional Permission to Eat (9 items; e.g., "If I am craving a certain food, I allow myself to have it"), (b) Eating for Physical Rather Than Emotional Reasons (6 items; e.g., "I stop eating when I feel full [not overstuffed]"), and (c) Reliance on Internal Hunger and Satiety Cues (6 items; e.g., "I trust my body to tell me how much to eat"). Participants rate items on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Subscale items are averaged, with higher scores indicating higher levels of intuitive eating.

Tylka (2006) investigated the psychometric properties of the IES with four samples of predominantly Caucasian American college women. Exploratory and confirmatory factor analyses upheld the three-factor structure of the IES; Unconditional Permission to Eat account for 28% of IES's total variance, Eating for Physical Rather Than Emotional Reasons accounted for 14% of this variance, and Reliance on Internal Hunger/Satiety Cues accounted for 7% of this variance. The internal consistency reliability of the IES subscale scores was supported, with Cronbach's coefficient alphas for Unconditional Permission to Eat ranging from .87 to .91, Eating for Physical Rather Than Emotional Reasons ranging from .85 to .89, and Reliance on Internal Hunger and Satiety Cues ranging from .72 to .78. The retest reliability of the scores was upheld over a 3-week period ( $r_s = .88$ , .88, and .74 for the subscales, respectively). The construct validity of the scales was demonstrated by their negative relationships to ED symptomatology ( $r_s = -.76$ ,  $-.24$ , and  $-.27$  for the subscales, respectively), negative relationships to poor interoceptive awareness ( $r_s = -.36$ ,  $-.39$ , and  $-.28$  for the subscales, respectively), and negligible relationships to impression management ( $r_s = .07$ ,  $.06$ , and  $.16$  for the subscales, respectively). For the present study, Cronbach's coefficient alphas were .88, .85, and .75 for the respective subscales.

*Eating Attitudes Test-26 (EAT-26).* The EAT-26 (Garner, Olmsted, Bohr, & Garfinkel, 1982) was used to assess women's levels of ED symptomatology. It contains three subscales, which have been supported by factor analysis (Garner et al., 1982): Dieting (13 items; e.g., "I feel extremely guilty after eating"), Bulimia/Food Preoccupation (6 items; e.g., "I have gone on eating binges where I feel that I may not be able to stop"), and Oral Control (6 items; e.g., "I feel that others would prefer if I ate more"). Each item is rated on a scale ranging from 1 (*never*) to 6 (*always*). Per Garner et al. (1982), the responses never, rarely, and sometimes receive a score of 0, and the responses often, very often, and always receive scores of 1, 2, and 3, respectively. Subscale items are summed to obtain total subscale scores; higher scores indicate greater ED symptomatology.

Garner et al. (1982) reported Cronbach's alpha coefficients of .86 for Dieting, .61 for Bulimia/Food Preoccupation, and .46 for Oral Control in a sample of women without EDs and coefficients of .90, .84, and .83, respectively, in a sample of women with anorexia. In the present study, Cronbach's alpha coefficients were .88 for Dieting, .82 for Bulimia/Food Preoccupation, and .60 for Oral Control. Among college women, a 3-week test-retest reliability estimate of  $r = .80$  for the total EAT-26 score has been reported (retest reliability coefficients for individual subscales were not reported; Mazzeo, 1999). The convergent validity of the first two subscales was upheld via their relationships to bulimic symptomatology (i.e.,  $r = .71$  for Dieting and  $r = .73$  for Bulimia/Food Preoccupation) among college women (Mazzeo & Espelage, 2002).

*Positive Affect subscale of the Positive and Negative Affect Schedule—Expanded (PANAS-X).* The Positive Affect scale of the PANAS-X (Watson et al., 1988) contains 10 emotion words (e.g., "enthusiastic", "determined") in which participants rated the degree they experience each emotion in general on a 5-point scale ranging from 1 (*very slightly or not at all*) to 5 (*extremely*). In order to retain the PANAS-X's integrity, the

Negative Affect subscale was also administered to the participants, and the emotions were presented in the order specified by Watson et al. (1988). Yet, because we were more interested in exploring indices of positive psychological well-being, only results from the Positive Affect subscale were calculated. Responses associated with the 10 positive emotion words were summed to arrive at a subscale score, with higher scores indicating greater positive affect. Among undergraduate students, a Cronbach's alpha coefficient of .87 and a 2-month retest correlation of  $r = .70$  have been reported for scores obtained with the Positive Affect subscale (Watson & Clark, 1994; Watson et al., 1988). For the present study, Cronbach's alpha coefficient was .87 for its scores. The Positive Affect scale has been shown to be inversely related to depression ( $r = -.35$ ) and anxiety ( $r = -.35$ ) among undergraduate students, supporting its construct validity (Watson et al., 1988).

*Rosenberg Self-Esteem Scale (RSE).* The RSE (Rosenberg, 1965), a widely used measure of self-esteem, contains 10 items (e.g., "I feel that I have a number of good qualities") rated on a 4-point scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). Although the RSE originally was scored with Guttman procedures, it is more common for researchers to report an average score for this measure. Therefore, to be consistent with recent research, the RSE items were averaged in the present study, with higher scores reflecting greater self-esteem. Among college women, a Cronbach's coefficient alpha of .93 has been reported for its scores (Tylka & Subich, 2004). For the present study, Cronbach's coefficient alpha was .90 for its scores. For college students, its scores were stable over a 2-week period ( $r = .85$ ), and it was related to another measure of self-esteem ( $r = .59$ ), which supports its construct validity (Robinson & Shaver, 1973).

*Proactive Coping subscale of the Proactive Coping Inventory (PCI).* The Proactive Coping subscale of the PCI (Greenglass et al., 1999) was used to assess women's tendency to engage in proactive coping. It contains 14 items (e.g., "I always try to find a way to work around obstacles; nothing really stops me") rated on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Items are averaged, with higher scores indicating greater use of proactive coping. Among Canadian college students, a Cronbach's alpha coefficient of .85 for its scores has been reported, and evidence for its construct validity was garnered, as it was related to proactive attitudes ( $r = .70$ ) and generalized self-efficacy ( $r = .70$ ; Greenglass et al., 1999). For the present study, Cronbach's coefficient alpha was .89 for its scores. The retest reliability of its scores has not been reported.

**Results**

Due to the inadequate internal consistency reliability of the EAT-26 Oral Control subscale, only the Dieting and Bulimia/Food

Preoccupation subscales were used as measures of ED symptomatology in the analyses. Data first were examined to ensure that the variables' distributions met the statistical assumptions of the planned analyses (i.e., normality, linearity, homoscedasticity). A significant positive skew was uncovered for both EAT-26 Dieting and Bulimia/Food Preoccupation subscales; no other substantial violations were uncovered. We performed a square root transformation on the Dieting subscale given its moderate positive skew and an inverse transformation on the Bulimia/Food Preoccupation subscale given its severe positive skew. These transformations resulted in both variables being normally distributed (for the transformed skewness and kurtosis values, both  $z_s < 1.96$ ). Data then were screened for outliers (via Mahalanobis distance, Cook's distance, and centered leverage values) in the relationships between (a) ED symptomatology (i.e., EAT-26 Dieting and Bulimia/Food Preoccupation subscales) and each criterion (i.e., positive affect, self-esteem, and proactive coping) and (b) intuitive eating (i.e., IES subscales) and each criterion. Two cases had extremely large Mahalanobis distance values and were deleted from the data set. Cook's distance and centered leverage values were in the acceptable range for all cases.

We analyzed the data first with the untransformed EAT-26 subscale scores and second with the transformed EAT-26 subscale scores. Across all analyses reported in this study, no substantive differences were noted in the conclusions reached through the two approaches (i.e., the patterns of significant and nonsignificant variables remained the same and the strengths of the correlations/beta weights were similar). Therefore, we reported the results obtained from the untransformed subscale scores, so these scores could be directly compared with other studies that used the EAT-26. Means, standard deviations, and intercorrelations of the measures are included in Table 1.

We used hierarchical multiple regression to determine whether the IES subscales predicted unique variance in each of the well-being measures above and beyond the variance accounted for by the EAT-26 subscales. Therefore, in the prediction of each well-being measure, the EAT-26 Dieting and Bulimia/Food Preoccupation subscales were entered at Step 1 of the regression equation and the IES Unconditional Permission to Eat, Eating for Physical Rather Than Emotional Reasons, and Reliance on Internal Hunger/Satiety Cues subscales were entered at Step 2 of the regression

Table 1  
Means, Standard Deviations, and Correlations Among the Measures of Study 1

Measure	Response			Measure						
	M	SD	Range	1	2	3	4	5	6	7
1. EAT-26: Dieting	6.78	7.16	0-39	—						
2. EAT-26: Bulimia/Food Preoccupation	1.00	2.42	0-18	.69***	—					
3. IES: Unconditional Permission to Eat	3.17	0.81	1-5	-.67***	-.40***	—				
4. IES: Eating for Physical Reasons	2.94	0.80	1-5	-.13*	-.26***	.15**	—			
5. IES: Reliance on Hunger/Satiety Cues	3.65	0.52	1-5	-.35***	-.36***	.29***	.38***	—		
6. PANAS-X: Positive Affect	37.23	5.98	10-50	-.04	-.11*	.03	.25***	.33***	—	
7. RSE: Self-esteem	3.23	0.49	1-4	-.29***	-.29***	.23***	.30***	.34***	.51***	—
8. PCI: Proactive coping	3.78	0.51	1-5	-.09	-.19***	.11*	.26***	.33***	.62***	.63***

Note.  $N = 338$ . EAT-26 = Eating Attitudes Test-26; IES = Intuitive Eating Scale; PANAS-X = Positive and Negative Affect Schedule—Expanded; RSE = Rosenberg Self-Esteem Scale; PCI = Proactive Coping Inventory.  
\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

equation. A statistically significant increment in  $R^2$  at Step 2 would indicate that intuitive eating predicted unique variance in a well-being measure over and above that of ED symptomatology, and an exploration of the statistical significance of the beta weights of the IES subscales at Step 2 would reveal which component or components of intuitive eating uniquely predicted well-being. Because a total of three hierarchical regression analyses were performed, we set the  $p$  level at .017 (.05/3) to control for experiment-wise error. Table 2 presents the findings for these analyses.

### Positive Affect

As hypothesized, intuitive eating predicted a unique amount of variance in positive affect over and above the variance accounted for by ED symptomatology ( $\Delta R^2$  of Step 2 = .119). An exploration of the beta weights at Step 2 revealed that Eating for Physical Rather Than Emotional Reasons and Reliance on Internal Hunger/Satiety Cues contributed an incremental amount of variance in positive affect, whereas Unconditional Permission to Eat did not.

### Self-Esteem

Consistent with expectations, intuitive eating also predicted a unique amount of variance in self-esteem over and above the

variance accounted for by ED symptomatology ( $\Delta R^2$  of Step 2 = .093). Eating for Physical Rather Than Emotional Reasons and Reliance on Internal Hunger/Satiety Cues contributed an incremental amount of variance in self-esteem at Step 2, whereas Unconditional Permission to Eat did not.

### Proactive Coping

Similar to the findings for positive affect and self-esteem, intuitive eating predicted an incremental amount of variance to proactive coping over and above the variance accounted for by ED symptomatology ( $\Delta R^2$  of Step 2 = .103). Eating for Physical Rather Than Emotional Reasons and Reliance on Internal Hunger/Satiety Cues contributed an incremental amount of variance in proactive coping; yet, Unconditional Permission to Eat was not uniquely associated with proactive coping.

### Study 2

Study 1 revealed that unconditional permission to eat overlapped substantially with ED symptomatology, whereas eating for physical rather than emotional reasons and reliance on internal hunger/satiety cues each contributed incrementally to positive af-

Table 2  
Study 1 Incremental Variance in Psychological Well-Being Accounted for by Intuitive Eating Scale (IES) Scores

Step/predictor	Cumulative $R^2$	Adjusted $R^2$	$\Delta R^2$	$\Delta F$	Shared variance	$\beta$	$t(337)$
Criterion: Positive affect, overall $F(5, 332) = 10.26^*$							
Step 1	.015	.009	.015	17.25*			
Step 2	.134	.121	.119	12.5*	.045		
Predictors at Step 2							
EAT-26: Dieting						.078	0.87
EAT-26: Bulimia/Food Preoccupation						-.044	-0.52
IES: Unconditional Permission to Eat						-.044	-0.62
IES: Eating for Physical Reasons						.137	2.43*
IES: Reliance on Hunger/Satiety Cues						.304	5.16*
Criterion: Self-esteem, overall $F(5, 332) = 15.10^*$							
Step 1	.098	.093	.098	17.51*			
Step 2	.192	.179	.093	12.26*	.122		
Predictors at Step 2							
EAT-26: Dieting						-.120	-1.35
EAT-26: Bulimia/Food Preoccupation						-.062	-0.85
IES: Unconditional Permission to Eat						.060	0.86
IES: Eating for Physical Reasons						.195	3.54*
IES: Reliance on Hunger/Satiety Cues						.197	3.44*
Criterion: Proactive coping, overall $F(5, 332) = 11.10^*$							
Step 1	.040	.034	.040	6.98*			
Step 2	.143	.130	.103	13.33*	.055		
Predictors at Step 2							
EAT-26: Dieting						.163	1.82
EAT-26: Bulimia/Food Preoccupation						-.150	-2.02
IES: Unconditional Permission to Eat						.063	0.90
IES: Eating for Physical Reasons						.139	2.44*
IES: Reliance on Hunger/Satiety Cues						.263	4.48*

Note.  $N = 338$ . Degrees of freedom corresponding to  $\Delta F$  are 2, 335 for Step 1 and 3, 332 for Step 2. Shared variance values represent the overlapping variance among the Eating Attitudes Test-26 (EAT-26) and IES subscales on the well-being criteria. Each shared variance value was calculated by summing the individual squared semipartial correlation associated with each Step 2 predictor and subtracting this value from the total percentage of criterion variance accounted for by the set of predictors (i.e., Step 2 cumulative  $R^2$ ).

\*  $p < .017$ .

fect, self-esteem, and proactive coping, supporting their distinctiveness from ED symptomatology. Four additional adaptive psychological resources have been theorized and/or found to be related to eating behavior (i.e., optimism, unconditional self-regard, psychological hardiness, and social problem solving). Therefore, Study 2 was undertaken to explore whether the components of intuitive eating were uniquely associated with these indices of psychological well-being after controlling for the contribution made by ED symptomatology. Our justification for examining intuitive eating's unique contribution to these psychological health indices is presented next.

### *Optimism*

Optimism is the generalized sense of confidence that good things will happen; people with high levels of this variable approach problems and challenges with persistence even when progress is slow and/or difficult (Carver & Scheier, 2003). As such, optimistic people are more likely to experience fewer deleterious physical (e.g., ambulatory blood pressure) and emotional (e.g., negative mood, anxiety) consequences of stressful situations than people who are pessimistic (Räikkönen, Matthews, Flory, Owens, & Gump, 1999). Furthermore, optimism was found to be strongly related to life satisfaction, self-esteem, and proactive coping (Tylka, 2006). Preliminary research has explored the connection between optimism and eating behaviors and has revealed that women athletes with EDs have lower levels of optimism than women athletes without EDs (Blaydon, Linder, & Kerr, 2004), and optimism was slightly to moderately related to the components of intuitive eating among college women (Tylka, 2006).

### *Unconditional Self-Regard*

Unconditional self-regard, the congruence between the real self (i.e., a person's actual qualities) and ideal self (i.e., the qualities a person desires to have), is considered to be an essential component of psychological health (Rogers, 1961). A discrepancy between the real and ideal selves is thought to be the basis for psychological distress, and a key target for counseling interventions is to achieve a greater degree of congruence between these selves. People with high levels of unconditional self-regard perceive themselves to be worthwhile and tend to have more realistic appraisals of themselves, their relationships, and the environment. Indeed, unconditional self-regard was strongly related in a positive direction to self-esteem and hardiness and strongly related in a negative direction to anxiety and depression among college students (Betz, Wohlgemuth, Serling, Harshbarger, & Klein, 1995). It has been asserted that individuals with high levels of unconditional self-regard are more likely to accept their bodies, to not try to conform to an unrealistic societal prototype of attractiveness, and to honor their internal hunger/satiety signals rather than diet (Tribole & Resch, 1995). Intuitive eating has been found to be negatively related to body dissatisfaction, suggesting that intuitive eating is related to congruence between the real and ideal self (Tylka, 2006). Self-acceptance may be viewed as a catalyst for nourishing the body by eating intuitively.

### *Psychological Hardiness*

Psychological hardiness, when conceptualized as a unidimensional construct, refers to the capacity to endure hardship and

privation (Younkin & Betz, 1995). Psychological hardiness is an indicator of resilience, or the ability to recover from adversity, which has substantial implications for psychological well-being. Indeed, when operationalized in this fashion and explored with college students, psychological hardiness was (a) strongly related in a positive direction to self-esteem and autonomy and (b) strongly related in a negative direction to symptomatology associated with psychological disorders (Younkin & Betz, 1995). Among students who perceived high levels of stress in their lives, those who also reported higher levels of psychological hardiness experienced lower depression and maladaptive symptomatology than those reporting lower levels of psychological hardiness. Although the association between hardiness and intuitive eating has not yet been examined, intuitive eating has been linked to using positive coping strategies, and one of its components reflects the tendency to not use food to cope with emotional distress (Tylka, 2006); thus, intuitive eating is related to dealing with stress in a resilient and proactive way.

### *Social Problem Solving*

Social problem solving is a conscious, rational, effortful, and purposeful coping process that enhances a person's ability to deal effectively with stressful situations across many domains (D'Zurilla & Chang, 1995). People who engage in social problem solving conceptualize a problem as a challenge rather than a threat, believe that problems can be solved successfully, are realistic regarding defining problems and the means necessary to solve them, generate a variety of alternatives to solve problems, work to solve problems rather than avoiding them, and evaluate the outcomes of solutions (D'Zurilla, Nezu, & Maydeu-Olivares, 1997). Many studies have found that social problem solving is negatively related to depression and anxiety and positively related to positive affect, life satisfaction, and self-esteem (see D'Zurilla, Chang, & Sanna, 2004, for a review). Currently, a goal of many ED treatment and prevention programs is to increase social problem solving, as the adoption of these adaptive coping skills could buffer the stress and negative affect that precipitates ED symptomatology (Tobin, 2000). Although the relationship between intuitive eating and social problem solving has not yet been explored, it seems reasonable to argue that there would be a positive relationship between these variables because intuitive eating involves dealing with negative affective states without using food as a coping mechanism.

### *Hypotheses*

Given that a positive outlook, self-acceptance, and positive coping indicate a respect for the body, we predicted that intuitive eating would be uniquely associated with optimism, unconditional self-regard, hardiness, and social problem solving after controlling for the negative contribution made by ED symptomatology. We further predicted that eating for physical rather than emotional reasons and reliance on internal hunger/satiety cues would make incremental contributions to the psychological health indices on account of their slight-to-moderate relations with ED symptomatology and that unconditional permission to eat would not contribute uniquely to the psychological health indices because of its

strong conceptual overlap with low levels of ED symptomatology (Tylka, 2006).

### Method

#### Participants and Procedure

The data set included responses from 397 women from a large midwestern university. Participants ranged in age from 17 to 55 ( $M = 18.72$ ,  $SD = 2.44$ ) and identified themselves as Caucasian American (81.6%), African American (8.3%), Asian American (4.3%), Latina (1.8%), multiracial (1.3%), or other (2.3%). A large majority of the participants were first-year students (82.1%); of the remaining participants, 12.6% were sophomores, 2.5% were juniors, and 1.8% were seniors. One participant (0.3%) classified herself as a post-baccalaureate student, and 3 women (0.8%) did not specify their college rank. Ten women who did not answer 90% or more of any given measure were not included in the data set.

Women from introductory psychology classes read a description of the study and enrolled via the psychology department Web site. The study was described as an investigation of the relationships between eating habits and personality. After participants signed the informed consent form and were guaranteed anonymity, they completed the measures, which were counter-balanced, in a research laboratory. They received course credit for their involvement. All Study 2 participants were recruited 1 year after the participants from Study 1 were recruited, and most women were first-year students. Therefore, it is unlikely that any overlap in participation between Study 1 and Study 2 occurred.

#### Measures

**IES.** The IES (Tylka, 2006) is discussed in detail in Study 1. In Study 2, Cronbach's coefficient alphas were .89 for Unconditional Permission to Eat, .87 for Eating for Physical Rather Than Emotional Reasons, and .77 for Reliance on Internal Hunger/Satiety Cues.

**EAT-26.** Descriptive and psychometric information on the EAT-26 (Garner et al., 1982) is presented in Study 1. In Study 2, Cronbach's coefficient alphas were .91 for Dieting, .76 for Bulimia/Food Preoccupation, and .61 for Oral Control.

**Life Orientation Test—Revised (LOT-R).** The LOT-R (Scheier, Carver, & Bridges, 1994) contains six items that assess generalized optimism (e.g., "In uncertain times, I usually expect the best") and four filler items. Items are rated on a 4-point scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). The six nonfiller items are averaged; higher scores indicate a greater optimistic life orientation. Among a sample of college students, the internal consistency reliability (Cronbach's coefficient alpha) for its scores was .82, and it was related to self-esteem ( $r = .54$ ), self-mastery ( $r = .55$ ), trait anxiety ( $r = -.59$ ), and neuroticism ( $r = -.50$ ), which supports its construct validity (Scheier et al., 1994). For the present study, Cronbach's coefficient alpha was .83 for its scores.

**Unconditional Self-Regard Scale (USRS).** The USRS (Betz et al., 1995). The USRS contains 15 items (e.g., "Even though I make mistakes, I still feel good about myself as a person") that measure participants' unconditional self-acceptance adapted from Carl Rogers's (1964) notion of congruence between the ideal self and the actual self, along with five filler items. Responses to the items are obtained on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The 15 nonfiller items are averaged, with higher scores indicating higher levels of unconditional self-regard. Among samples of college students, the internal consistency reliability (Cronbach's coefficient alpha) for its scores has ranged from .87 to .90, and it has been found to be related to self-esteem ( $r = .78$ ) and anxiety ( $r = -.70$ ) and to be unrelated to social desirability ( $r = .00$ ), yielding evidence of construct validity (Betz et al., 1995). For the present study, Cronbach's coefficient alpha was .92 for its scores. Retest reliability of the USRS's scores has not yet been explored.

**Psychological Hardiness Scale—Short Form (PHS-SF).** The PHS-SF (Betz & Campbell, 2003) is a 20-item abbreviated version of the original 40-item PHS (Younkin & Betz, 1995). Each item (e.g., "When faced with a difficult situation, I usually feel like I can handle it") is rated on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), and the items are averaged to obtain a total score. Higher scores indicate higher levels of psychological hardiness. Among a sample of college students, Cronbach's coefficient alpha for the measure was .92; it was found to correlate with the original 40-item PHS ( $r = .98$ ), and its construct validity was supported by its relationships to instrumentality ( $r = .83$ ), optimism ( $r = .59$ ), and generalized self-efficacy ( $r = .79$ ; Betz & Campbell, 2003). For the present study, Cronbach's coefficient alpha was .91 for scores of the PHS-SF. Retest reliability of has not yet been investigated.

**Social Problem Solving Inventory—Revised (SPSI-R).** The SPSI-R (D'Zurilla et al., 1997) assesses the utilization of effective or adaptive ways of coping with problematic situations encountered in everyday living. It contains 52 items that are rated on a 5-point scale ranging from 0 (*not at all true of me*) to 4 (*extremely true of me*). Although the SPSI-R can be divided into subscales, a total score is often computed (see D'Zurilla et al., 1997, for this procedure). To limit the number of analyses in the present study, only the total SPSI-R score was calculated. Higher SPSI-R scores reflect more constructive, effective, and facilitative problem solving. Cronbach's coefficient alpha for the total SPSI-R score was .95 with a sample of college students (D'Zurilla et al., 1997). For the present study, its Cronbach's coefficient alpha was .94. The stability of the total SPSI-R over a 2-week period was supported for a sample of college students ( $r = .87$ ; D'Zurilla & Sheedy, 1991). The SPSI-R has been found to be negatively related to depressive symptomatology ( $r = -.46$ ) and suicidal ideation ( $r = -.39$ ) among college students, supporting its construct validity (Chang, 2002).

#### Results

Similar to Study 1, the Oral Control subscale of the EAT-26 was not analyzed as a measure of ED symptomatology because of the low internal consistency reliability of its scores. We first examined the data to determine whether the variables' distributions met the statistical assumptions of the planned analyses (i.e., normality, linearity, homoscedasticity). We performed a logarithm transformation on the EAT-26 Bulimia/Food Preoccupation subscale given its substantial positive skew; this subscale was normally distributed as a result of this transformation ( $z < 1.96$ ). No other substantial violations were uncovered. We then screened the data for outliers (examining Mahalanobis distance, Cook's distance, and centered leverage values) in the relationships between (a) ED symptomatology (i.e., EAT-26 Dieting and Bulimia/Food Preoccupation subscales) and each criterion (i.e., optimism, unconditional self-regard, hardiness, and social problem solving) and (b) intuitive eating (i.e., IES subscales) and each criterion. One case had an extremely large Mahalanobis distance value and was deleted from the data set. Cook's distance and centered leverage values were in the acceptable range for all cases.

We analyzed the data first with the untransformed Bulimia/Food Preoccupation subscale score and second with the transformed score. Across all analyses, no substantive differences were noted in the conclusions reached through the two approaches (i.e., the patterns of significant and nonsignificant variables remained the same and the strengths of the correlations/beta weights were similar). Therefore, we reported results using the untransformed Bulimia/Food Preoccupation subscale score. Table 3 presents means, standard deviations, and intercorrelations of the Study 2 measures.

Table 3  
Means, Standard Deviations, and Correlations Among the Measures of Study 2

Measure	Response			Measure								
	<i>M</i>	<i>SD</i>	Range	1	2	3	4	5	6	7	8	
1. EAT-26: Dieting	10.76	8.17	0–39	—								
2. EAT-26: Bulimia/Food Preoccupation	1.36	2.47	0–18	.60***	—							
3. IES: Unconditional Permission to Eat	3.14	0.92	1–5	-.73***	-.36***	—						
4. IES: Eating for Physical Reasons	2.68	0.91	1–5	-.21***	-.37***	.17**	—					
5. IES: Reliance on Hunger/Satiety Cues	3.61	0.62	1–5	-.26***	-.30***	.21***	.29***	—				
6. LOT-R: Optimism	3.46	0.80	1–5	-.21***	-.13*	.10*	.25***	.24***	—			
7. Unconditional Self-Regard Scale	3.56	0.74	1–5	-.32***	-.23***	.24***	.28***	.32***	.73***	—		
8. Psychological Hardiness Scale–SF	3.44	0.65	1–5	-.19***	-.18***	.11*	.34***	.25***	.67***	.70***	—	
9. Social Problem Solving Scale—Revised	12.40	2.84	0–20	-.06	-.16**	-.02	.30***	.23***	.50***	.48***	.65***	—

Note. *N* = 396. EAT-26 = Eating Attitudes Test–26; IES = Intuitive Eating Scale; LOT-R = Life Orientation Test—Revised, SF = Short Form.  
\* *p* < .05. \*\* *p* < .01. \*\*\* *p* < .001.

We used hierarchical multiple regression to determine whether the IES subscales predicted unique variance in each well-being measure above and beyond the variance accounted for by the EAT-26 subscales. In each regression equation, the EAT-26 Dieting and Bulimia/Food Preoccupation subscales were entered at Step 1 and the IES Unconditional Permission to Eat, Eating for Physical Rather Than Emotional Reasons, and Reliance on Internal Hunger/Satiety Cues subscales were entered at Step 2. Because four hierarchical regression analyses were performed, we set the *p* level at .013 (.05/4). Table 4 presents the results from these analyses.

### Optimism

As anticipated, intuitive eating predicted a unique amount of variance in optimism above and beyond the variance accounted for by ED symptomatology ( $\Delta R^2$  of Step 2 = .085). Eating for Physical Rather Than Emotional Reasons and Reliance on Internal Hunger/Satiety Cues contributed an incremental amount of variance in optimism, whereas Unconditional Permission to Eat did not.

### Unconditional Self-Regard

Consistent with hypotheses, intuitive eating predicted a unique amount of variance in unconditional self-regard over and above the variance accounted for by ED symptomatology ( $\Delta R^2$  of Step 2 = .086). Both Eating for Physical Rather Than Emotional Reasons and Reliance on Internal Hunger/Satiety Cues contributed an incremental amount of variance in unconditional self-regard; however, Unconditional Permission to Eat did not.

### Psychological Hardiness

As expected, intuitive eating was found to uniquely predict hardiness after considering the variance accounted for by ED symptomatology ( $\Delta R^2$  of Step 2 = .108). Eating for Physical Rather Than Emotional Reasons and Reliance on Internal Hunger/Satiety Cues contributed uniquely to hardiness, whereas Unconditional Permission to Eat did not.

### Social Problem Solving

Consistent with predictions, intuitive eating contributed unique variance in social problem solving above and beyond the variance accounted for by ED symptomatology ( $\Delta R^2$  of Step 2 = .095). Eating for Physical Rather Than Emotional Reasons and Reliance on Internal Hunger/Satiety Cues predicted unique variance in social problem solving, but Unconditional Permission to Eat did not.

## General Discussion

In two studies, we examined whether intuitive eating is an overlapping construct with ED symptomatology (i.e., where high levels of intuitive eating simply reflect low levels of ED symptomatology) or whether intuitive eating has unique components that are associated with psychological well-being above and beyond the contribution made by ED symptomatology. Our results partially supported both perspectives. One component of intuitive eating, unconditional permission to eat, did not contribute incrementally to any index of psychological well-being above that of ED symptomatology. When examining bivariate relationships, unconditional permission to eat was related in a positive direction to all psychological well-being indices except for positive affect. These relationships, along with the strong relationships of unconditional permission to eat and ED symptomatology (especially dietary restraint), suggest that these constructs may be overlapping, such that low levels of ED symptomatology are similar to higher levels of unconditional permission to eat. Results for this intuitive eating component are consistent with the ED continuum hypothesis (Mintz & Betz, 1988; Tylka & Subich, 1999) in which unconditional permission to eat and bona-fide clinical EDs represent the poles of the continuum, with disordered eating behaviors increasing in severity and psychological well-being decreasing along the continuum.

However, the two other components of intuitive eating, eating for physical rather than emotional reasons and reliance on internal hunger/satiety cues, made incremental contributions to all the psychological well-being indices after the contribution of ED symptomatology was considered. Together, they accounted for



Table 4  
 Study 2 Incremental Variance in Psychological Well-Being Accounted for by Intuitive Eating Scale (IES) Scores

Step/predictor	Cumulative $R^2$	Adjusted $R^2$	$\Delta R^2$	$\Delta F$	Shared variance	$\beta$	$t(395)$
Criterion: Optimism, overall $F(5, 390) = 11.34^*$							
Step 1	.043	.038	.043	8.73*			
Step 2	.127	.116	.085	12.57*	.016		
Predictors at Step 2							
EAT-26: Dieting						-.298	-3.62*
EAT-26: Bulimia/Food Preoccupation						.126	1.98
IES: Unconditional Permission to Eat						-.145	-2.05
IES: Eating for Physical Reasons						.212	4.06*
IES: Reliance on Hunger/Satiety Cues						.176	3.45*
Criterion: Unconditional self-regard, overall $F(5, 390) = 18.05^*$							
Step 1	.102	.098	.102	22.31*			
Step 2	.188	.178	.086	18.05*	.096		
Predictors at Step 2							
EAT-26: Dieting						-.255	-3.21*
EAT-26: Bulimia/Food Preoccupation						.051	0.83
IES: Unconditional Permission to Eat						-.007	-0.10
IES: Eating for Physical Reasons						.189	3.75*
IES: Reliance on Hunger/Satiety Cues						.214	4.35*
Criterion: Psychological hardiness, overall $F(5, 390) = 13.83^*$							
Step 1	.043	.038	.043	8.71*			
Step 2	.151	.140	.108	16.56*	.044		
Predictors at Step 2							
EAT-26: Dieting						-.196	-2.41
EAT-26: Bulimia/Food Preoccupation						.060	0.95
IES: Unconditional Permission to Eat						-.094	-1.35
IES: Eating for Physical Reasons						.289	5.61*
IES: Reliance on Hunger/Satiety Cues						.152	3.01*
Criterion: Social problem solving, overall $F(5, 390) = 10.92^*$							
Step 1	.028	.023	.028	5.63*			
Step 2	.123	.112	.095	14.07*	.040		
Predictors at Step 2							
EAT-26: Dieting						-.053	-0.64
EAT-26: Bulimia/Food Preoccupation						-.041	-0.64
IES: Unconditional Permission to Eat						-.145	-2.05
IES: Eating for Physical Reasons						.250	4.78*
IES: Reliance on Hunger/Satiety Cues						.160	3.11*

Note.  $N = 396$ . Degrees of freedom corresponding to  $\Delta F$  are 2, 393 for Steps 1 and 3, 390 for Step 2. Shared variance values represent the overlapping variance among the Eating Attitudes Test-26 (EAT-26) and IES subscales on the well-being criteria. Each shared variance value was calculated by summing the individual squared semipartial correlation associated with each Step 2 predictor and subtracting this value from the total percentage of criterion variance accounted for by the set of predictors (i.e., Step 2 cumulative  $R^2$ ).

\*  $p < .013$ .

between 8.5 and 11.9% (average = 9.8%) of unique variance in the psychological well-being indices. Furthermore, the EAT-26 and IES subscales shared only 1.6% to 12.2% of the variance in the psychological well-being indices (average = 6.0%). Therefore, support was accrued for their distinctiveness, suggesting that intuitive eating is more than the mere lack of ED symptomatology.

### Limitations

Most of the participants in the present study were young adult, Caucasian first-year psychology students. Research on intuitive eating has focused on predominantly Caucasian samples of college women, and it is unknown whether the intuitive eating components

can be extended to fit others' experiences and whether they are adaptive for diverse populations. If the intuitive eating components generalize to other individuals (e.g., noncollegiate women, women of color, men), then it would be important to determine whether this study's findings can be replicated with more diverse samples. Also, because participants were enrolled in psychology classes, they may be more aware of their well-being and behaviors than noncollegiate adults.

The integrity of our findings hinges on the ability of the IES and EAT-26 to appropriately assess their respective eating behavior constructs. The oral control EAT-26 subscale appears to yield reliable scores only with samples of women with anorexia (Garner et al., 1982); as such, we could not explore the contribution of this

subscale in the present study. Perhaps its items (e.g., “I cut my food into small pieces”, “Other people think that I am too thin”) are consistently endorsed by anorexic samples but have more mixed responses with college women who may, for instance, endorse the first sample item but not the second.

The present study’s exclusive use of self-report methodology also is somewhat limiting, as it relies on participants’ accurate reporting of their current level of functioning. It remains to be determined whether women’s perceptions of their eating habits (both intuitive eating and ED symptomatology) are an accurate portrayal of reality. Also, social desirability could have influenced participants’ responses on the psychological well-being measures, as several measures of well-being (but not measures of eating behavior such as the IES and EAT-26) were found to be related to impression management (Tylka, 2006). Therefore, it would be useful to control for social desirability in future research investigating the relationships between eating behaviors and psychological well-being.

### *Implications for Theory, Practice, and Research*

Despite the above limitations, the qualitative differences between intuitive eating and ED symptomatology have important implications for theory, practice, and research. First, our findings suggest that it is imperative that professionals recognize adaptive facets of eating and integrate these facets within the theoretical literature. Past theory on eating behaviors in the field of psychology has primarily focused on ED symptomatology without considering positive eating behaviors (Tylka, 2006). Specifically, current theory needs to emphasize that intuitive eating appears to have one main overlapping feature with ED symptomatology and two distinctive features. These distinctive features are critical to address, as they contribute to women’s well-being and do not seem to be assessed via the EAT-26. Having this information to consult would be beneficial to both (a) practitioners focused on preventing or treating disordered eating and promoting adaptive eating practices and (b) researchers who wish to focus on identifying predictors of adaptive eating.

Second, the present study’s findings can be used to inform clinical interventions aimed at increasing adaptive eating and decreasing ED symptomatology. A comprehensive treatment approach for disordered eating should result in an increase in adaptive characteristics in addition to a reduction of maladaptive symptoms (Tylka, 2006). Thus, helping clients cope with their emotions by means other than food and helping them identify and rely on their physiological hunger and satiety signals may increase their psychological well-being and foster adaptive eating, whereas encouraging clients to give themselves unconditional permission to eat may result in a reduction of ED symptomatology. The present study’s findings also have implications for psychoeducational interventions. For instance, as clients in treatment learn about their ED, they may benefit from learning not only how abstaining from disordered eating behaviors improves their health and well-being but also how adopting certain intuitive eating behaviors (i.e., eating for physical rather than emotional reasons, reliance on internal hunger/satiety cues) could further contribute to their ability to flourish and thrive. This information may help increase some clients’ investment in the treatment process, as clients with EDs

often are not motivated to seek and actively engage in treatment (Vitousek, Watson, & Wilson, 1998).

The present study’s findings also highlight the importance of clients’ detecting and attending to their emotions and physiological hunger/satiety signals, as this detection and awareness are uniquely connected to their well-being. Clients diagnosed with bulimia and binge eating disorder often eat to escape emotional distress and do not distinguish between their emotions and physical hunger (Heatherton & Baumeister, 1991). One intervention could be to encourage clients to articulate situations or emotional triggers that precipitate a binge and turn their attention inward (e.g., through journaling) when they notice their drive to eat. By delaying the urge to eat and paying attention to their inner experiences, they may notice that they are feeling frustrated or overwhelmed, for example, as opposed to physically hungry. Clinicians can work with clients to facilitate their recognition of particular needs in the moment (e.g., comfort, stimulation, belonging, anxiety reduction) that are associated with their emotions (e.g., sadness, boredom, loneliness, anxiousness) and, in turn, can help clients articulate more adaptive ways to attend to their needs. Similarly, when eating, clients can use this internal awareness to detect their satiety signals and then can practice discriminating these signals from their emotional needs. It may prove useful for practitioners to measure these components of intuitive eating at several points in therapy to gauge the improvement of clients’ internal awareness.

Third, given intuitive eating’s unique associations with psychological well-being, researchers could determine which adaptive environmental, intrapersonal, psychological, and biological variables may work together to predict intuitive eating behaviors. For instance, much research has supported that negative environmental characteristics (e.g., sexual objectification, pressure to be thin) predict maladaptive intrapersonal characteristics (e.g., emphasis on body appearance, neuroticism), which then predicts body shame, which in turn predicts ED symptomatology (Moradi, Dirks, & Matteson, 2005; Tylka & Hill, 2004; Tylka & Subich, 2004). Perhaps adaptive environmental (e.g., others’ unconditional acceptance of body shape, social support) and intrapersonal (e.g., positive attachment, feminist consciousness, self-esteem) characteristics would predict focusing on body function rather than appearance, which would then predict positive body image, which in turn would predict intuitive eating.

Studies need to explore how intuitive eating may go awry. Intuitive eating is believed to be an inborn characteristic that is disrupted by the environment. Young children exhibit intuitive eating but may change to dieting behavior as a result of parental concern and restriction of food intake (Birch et al., 2003; Birch & Fisher, 2000). Thus, direct environmental restriction of food intake may lead to the disruption of intuitive eating (Carper et al., 2000). Biological factors also could maintain or disrupt intuitive eating, as central serotonin mechanisms have been found to regulate appetite and eating behavior (see Steiger et al., 2005, for a review). Multivariate predictor models need to be developed and tested within the empirical literature. A clearer understanding of how intuitive eating develops and is maintained has valuable implications for health promotion and intervention, as it may help clinicians determine which intervention strategies are most effective for promoting this adaptive eating behavior.

African American women (but not other women of color) have been found to have higher levels of intuitive eating than Caucasian

women (Tylka, 2006). For many cultures, eating is a cultural and familial ritual that may interfere with eating for hunger rather than eating for social and cultural obligation and practice. Yet, during and outside of these rituals, African American women may be more likely to eat according to their bodies needs and not be preoccupied with food. Conversely, other women may be more likely to internalize Western cultural pressures to diet and thus may have a greater tendency to be preoccupied with food and eat in response to situational and emotional cues (Birch et al., 2003). Researchers could explore how an African ethnic identity, which has a lower pressure to restrict food intake and greater acceptance of a diversity of body sizes (Striegel-Moore & Cachelin, 1999), may help maintain intuitive eating among these women.

## References

- Baumeister, R. F. (1998). The self. In D. Gilbert, S. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (pp. 680–740). New York: Random House.
- Betz, N. E., & Campbell, C. (2003). *Self-efficacy and personality correlates of instrumentality*. Unpublished manuscript.
- Betz, N. E., Wohlgenuth, E., Serling, D., Harshbarger, J., & Klein, K. (1995). Evaluation of a measure of self-esteem based on the concept of unconditional self-regard. *Journal of Counseling and Development, 74*, 76–83.
- Birch, L. L., & Fisher, J. O. (2000). Mothers' child-feeding practices influence daughters' eating and weight. *American Journal of Clinical Nutrition, 71*, 1054–1061.
- Birch, L. L., Fisher, J. O., & Davison, K. K. (2003). Learning to overeat: Maternal use of restrictive feeding practices promotes girls' eating in the absence of hunger. *American Journal of Clinical Nutrition, 78*, 215–220.
- Bittinger, J. N., & Smith, J. E. (2003). Mediating and moderating effects of stress perception and situation type on coping responses in women with disordered eating. *Eating Behaviors, 4*, 89–106.
- Blaydon, M. J., Linder, K. J., & Kerr, J. H. (2004). Metamotivational characteristics of exercise dependence and eating disorders in highly active amateur sports participants. *Personality and Individual Differences, 36*, 1419–1434.
- Bolte, A., Goschkey, T., & Kuhl, J. (2003). Emotion and intuition: Effects of positive and negative mood on implicit judgments of semantic coherence. *Psychological Science, 14*, 416–421.
- Carper, J. L., Fisher, J. O., & Birch, L. L. (2000). Young girls' emerging dietary restraint and disinhibition are related to parental control in child feeding. *Appetite, 35*, 121–129.
- Carver, C. S., & Scheier, M. (2003). Optimism. In S. J. Lopez & C. R. Snyder (Eds.), *Positive psychological assessment: A handbook of models and measures* (pp. 75–89). Washington, DC: American Psychological Association.
- Chang, E. C. (2002). Examining the link between perfectionism and psychological maladjustment: Social problem solving as a buffer. *Cognitive Therapy and Research, 26*, 581–595.
- D'Zurilla, T. J., & Chang, E. C. (1995). The relations between social problem solving and coping. *Cognitive Therapy and Research, 19*, 547–562.
- D'Zurilla, T. J., Chang, E. C., & Sanna, L. J. (2004). *Social problem solving: Theory, research, and training*. Washington, DC: American Psychological Association.
- D'Zurilla, T. J., Nezu, A. M., & Maydeu-Olivares, A. (1997). *Manual for the Social Problem-Solving Inventory—Revised*. North Tonawanda, NY: Multi-Health Systems.
- D'Zurilla, T. J., & Sheedy, C. F. (1991). Relation between problem solving ability and subsequent level of psychological distress in college students. *Journal of Personality and Social Psychology, 61*, 841–846.
- Faith, M. S., Scanlon, K. S., Birch, L. L., Francis, L. A., & Sherry, B. (2004). Parent-child feeding strategies and their relationships to child eating and weight status. *Obesity Research, 12*, 1711–1722.
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist, 56*, 218–226.
- Fredrickson, B. L., & Joiner, T. (2002). Positive emotions trigger upward spirals toward emotional well-being. *Psychological Science, 13*, 172–175.
- Fredrickson, B. L., & Losada, M. F. (2005). Positive affect and the complex dynamics of human flourishing. *American Psychologist, 60*, 678–686.
- Garner, D. M., Olmsted, M. P., Bohr, Y., & Garfinkel, P. E. (1982). The Eating Attitudes Test: Psychometric features and clinical correlates. *Psychological Medicine, 12*, 871–878.
- Gorman, K. S. (1999). *Early stages of feminist identity, avoidant coping, and anorexic tendencies in undergraduate women*. Unpublished doctoral dissertation, University of Kentucky.
- Greenglass, E. R., Schwarzer, R., & Taubert, S. (1999). *The Proactive Coping Inventory (PCI)*. Retrieved June 10, 2005, from <http://www.psych.yorku.ca/greenglass>
- Heatherton, T. F., & Baumeister, R. F. (1991). Binge eating as an escape from self-awareness. *Psychological Bulletin, 110*, 86–108.
- Heatherton, T. F., & Wyland, C. L. (2003). Assessing self-esteem. In S. J. Lopez & C. R. Snyder (Eds.), *Positive psychological assessment: A handbook of models and measures* (pp. 219–233). Washington, DC: American Psychological Association.
- Herman, C. P., & Polivy, J. (1983). A boundary model for the regulation of eating. In A. J. Stunkard & E. Stellar (Eds.), *Eating and its disorders* (pp. 141–156). New York: Raven.
- Herman, C. P., Polivy, J., Lank, C. N., & Heatherton, T. F. (1987). Anxiety, hunger, and eating behavior. *Journal of Abnormal Psychology, 96*, 264–269.
- Kitsantas, A., Gilligan, T. D., & Kamata, A. (2003). College women with eating disorders: Self-regulation, life satisfaction, and positive/negative affect. *Journal of Psychology, 137*, 381–395.
- Lightsey, O. R. (1996). What leads to wellness? The role of psychological resources in well-being. *The Counseling Psychologist, 24*, 589–759.
- Lopez, S. J., Magyar-Moe, J. L., Petersen, S. E., Ryder, J. A., Krieschok, T. S., O'Byrne, K. K., Lichtenberg, J. W., & Fry, N. A. (2006). Counseling psychology's focus on positive aspects of human functioning. *The Counseling Psychologist, 34*, 205–227.
- Lopez, S. J., & Snyder, C. R. (Eds.). (2003). *Positive psychological assessment: A handbook of models and measures*. Washington, DC: American Psychological Association.
- Lyubomirsky, S., King, L. A., & Diener, E. (2005). The benefits of frequent positive affect: Does happiness lead to success? *Psychological Bulletin, 131*, 803–855.
- Mazzeo, S. E. (1999). Modification of an existing measure of body image preoccupation and its relationship to disordered eating in female college students. *Journal of Counseling Psychology, 46*, 42–50.
- Mazzeo, S. E., & Espelage, D. L. (2002). Association between childhood physical and emotional abuse and disordered eating behaviors in female undergraduates: An investigation of the mediating role of alexithymia and depression. *Journal of Counseling Psychology, 49*, 86–100.
- Mintz, L. B., & Betz, N. E. (1988). Prevalence and correlates of eating disordered behaviors among undergraduate women. *Journal of Counseling Psychology, 44*, 463–471.
- Moradi, B., Dirks, D., & Matteson, A. V. (2005). Roles of sexual objectification experiences and internalization of standards of beauty in eating disorder symptomatology: A test and extension of objectification theory. *Journal of Counseling Psychology, 52*, 420–428.
- Pelham, B. W., Koole, S. L., Hardin, C. D., Hetts, J. J., Seah, E., & DeHart,

- T. (2005). Gender moderates the relation between implicit and explicit self-esteem. *Journal of Experimental Social Psychology, 41*, 84–89.
- Peterson, C., & Seligman, M. E. P. (2004). *Values in Action (VIA) classification of strengths*. Washington, DC: American Psychological Association.
- Podar, I., Hannus, A., & Allik, J. (1999). Personality and affectivity characteristics associated with eating disorders: A comparison of eating disordered, weight preoccupied, and normal samples. *Journal of Personality Assessment, 73*, 133–147.
- Polivy, J., & Herman, C. P. (1999). Distress and eating: Why do dieters overeat? *International Journal of Eating Disorders, 26*, 153–164.
- Räikkönen, K., Matthews, K. A., Flory, J. D., Owens, J. F., & Gump, B. B. (1999). Effects of optimism, pessimism, and trait anxiety on ambulatory blood pressure and mood during everyday life. *Journal of Personality and Social Psychology, 76*, 104–113.
- Robinson, J. P., & Shaver, P. R. (1973). *Measures of social psychological attitudes* (2nd ed.). Ann Arbor, MI: Institute for Social Research.
- Rogers, C. R. (1961). *On becoming a person*. Boston: Houghton Mifflin.
- Rogers, C. R. (1964). Toward a modern approach to values: The valuing process in the mature person. *Journal of Abnormal and Social Psychology, 68*, 160–167.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.
- Scheier, M. F., Carver, C. S., & Bridges, M. W. (1994). Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): A reevaluation of the Life Orientation Test. *Journal of Personality and Social Psychology, 67*, 1063–1078.
- Schwarzer, R., & Knoll, N. (2003). Positive coping: Mastering demands and searching for meaning. In S. J. Lopez & C. R. Snyder (Eds.), *Positive psychological assessment: A handbook of models and measures* (pp. 393–409). Washington, DC: American Psychological Association.
- Seligman, M. E., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist, 55*, 5–14.
- Steiger, H., Gauvin, L., Engelberg, M. J., Kin, N. M., Israel, M., Wonderlich, S. A., & Richardson, J. (2005). Mood- and restraint-based antecedents to binge episodes in bulimia nervosa: Possible influences of the serotonin system. *Psychological Medicine, 35*, 1153–1162.
- Steptoe, A., Wardle, J., & Marmot, M. (2005). Positive affect and health-related neuroendocrine, cardiovascular, and inflammatory responses. *Proceedings of the National Academy of Sciences, USA, 102*, 6508–6512.
- Striegel-Moore, R. H., & Cachelin, F. M. (1999). Body image concerns and disordered eating in adolescent girls: Risk and protective factors. In N. G. Johnson & M. C. Roberts (Eds.), *Beyond appearance: A new look at adolescent girls* (pp. 85–108). Washington, DC: American Psychological Association.
- Tobin, D. L. (2000). *Coping strategies therapy for bulimia nervosa*. Washington, DC: American Psychological Association.
- Tribole, E., & Resch, E. (1995). *Intuitive eating: A recovery book for the chronic dieter*. New York: St. Martin's Press.
- Tylka, T. L. (2006). Development and psychometric evaluation of a measure of intuitive eating. *Journal of Counseling Psychology, 53*, 226–240.
- Tylka, T. L., & Hill, M. S. (2004). Objectification theory as it relates to disordered eating among college women. *Sex Roles, 51*, 719–730.
- Tylka, T. L., & Subich, L. M. (1999). Exploring the construct validity of the eating disorder continuum. *Journal of Counseling Psychology, 46*, 268–276.
- Tylka, T. L., & Subich, L. M. (2003). Revisiting the latent structure of eating disorders: Taxometric analyses with non-behavioral indicators. *Journal of Counseling Psychology, 50*, 276–286.
- Tylka, T. L., & Subich, L. M. (2004). Examining a multidimensional model of eating disorder symptomatology among college women. *Journal of Counseling Psychology, 51*, 314–328.
- Vitousek, K., Watson, S., & Wilson, G. T. (1998). Enhancing motivation for change in treatment-resistant eating disorders. *Clinical Psychology Review, 18*, 391–420.
- Watson, D., & Clark, L. A. (1994). *The PANAS-X: Manual for the Positive and Negative Affect Schedule—Expanded form*. Unpublished manuscript, University of Iowa.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and evaluation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*, 1063–1070.
- Younkin, S., & Betz, N. E. (1995). Psychological hardiness: A reconceptualization and measurement. In T. M. Miller (Ed.), *Theory and assessment of stressful life events* (pp. 157–174). Madison, CT: International Universities Press.
- Zalta, A. K., & Keel, P. K. (2006). Peer influences on bulimic symptoms in college students. *Journal of Abnormal Psychology, 115*, 185–189.

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