The Predictive Power of Depression, Immoderation, and Anxiety for Actual-Ideal Weight Discrepancy and Maladaptive Eating Behaviors

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Introduction

Neuroticism is the personality trait that defines the tendency towards negative feelings. These negative feelings are broken down into six lower-order facets (Bienvenu et al., 2004; Costa & McCrae, 1998 ; Maples-Keller et al., 2019; McCrae et al., 2005)

- Anxiety
- Angry-hostility
- Depression
- Self-Consciousness
- Immoderation
- Vulnerability

- We expected that some lower-order facets would better predict actual-ideal weight discrepancy (negative body image) and other facets would better predict maladaptive eating behaviors.

- Actual-ideal weight discrepancy is the difference between the weight that is perceived by the individual as acquired (actual weight) and the weight that the individual wishes to acquire (ideal weight; Swami et al., 2013; Vartanian, 2012).

- Those with higher levels of anxiety believe that eating will reduce negative feelings they are experiencing more than the people with lower levels of anxiety (Hearon et al., 2012; Hetherington et al., 1994; Kaye et al., 1986).

    - Eating in response to negative affect tends to occur in a maladaptive manner and has been shown to be more intense in individuals with anxiety and depression (Hetherington et al. 1994; Kaye et al. 1986).

Hypotheses

- The lower-order facets of anxiety, depression, and self-consciousness will be better predictors for actual-ideal weight discrepancy than angry-hostility, immoderation, and vulnerability.

- The lower-order facets of anxiety, depression, and immoderation will be better predictors for maladaptive eating behaviors than angry-hostility, self-consciousness, and vulnerability.

- Actual-ideal weight discrepancy will correlate with maladaptive eating behaviors

Method

Participants
- 235 students (150 women and 85 men)
- Ages of 18-24 (M = 19.96, SD = 1.26)
- Predominately Caucasian (85.96%)

Materials
- **Actual-Ideal Weight Discrepancy**
Stunkard Photographic Figure Rating Scale (FRS; Stunkard et al., 1983) contains nine front-view photos of women and men ranging in body size. Participants selected the image that best reflects their current body and the image that best reflects the body they would most ideally possess.

- **Lower-Order Facets of Neuroticism**
International Personality Item Pool-NEO (IPIP-NEO; Costa & McCrae, 1992) is a 12-item measure that examines the six lower-order facets of neuroticism. Items on the instrument were rated on a Likert scale (1 = *very inaccurate* to 5 = *very accurate*).
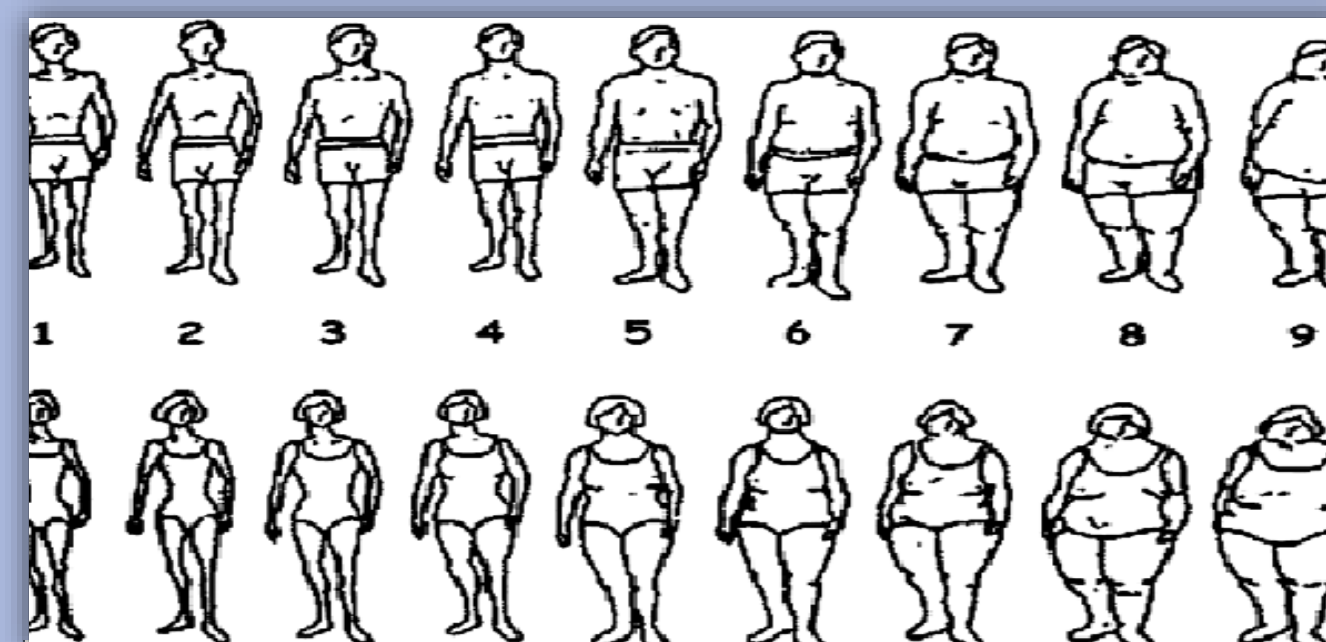
- **Maladaptive Eating Behaviors**
Eating Attitudes Test (EAT-26; Garner & Garfinkel, 1979) is a 26-item measure which is often used to examine eating attitudes. Items on the instrument were rated on a Likert scale where scores for questions 1-25 were coded as *Always* = 3 and *Never* = 0. Question 26 was coded as *Always* = 0 and *Never* = 3.

Procedure
Participants completed the following instruments online in the order indicated below
- FRS
- IPIP-NEO
- EAT-26
- Drive for Muscularity Scale (used in a different study)
- Demographic questions

Results

A stepwise, multiple linear regression was calculated to predict participants' actual-ideal weight discrepancy based on their lower order facets of neuroticism and maladaptive eating behaviors. A significant regression equation was found

- $F(7, 232) = 19.49$, p < .001 with an R^2 of .144

- Actual-Ideal Weight Discrepancy = 1.148 + .119(Depression) - .110(Immoderation)

Table 1

Multiple Linear Regression Analysis Summary of the Variables Studied

Variable	B	SE B	β	t	p
Depression	0.12	0.03	.28	4.52	.000
Immoderation	-0.11	0.03	-.21	-3.46	.001
Vulnerability	-	-	.09	1.45	.149
Anxiety	-	-	-.09	-1.25	.213
Self-Consciousness	-	-	-.06	-0.86	.393
Maladaptive Eating Behaviors	-	-	.05	0.82	.416
Angry-Hostility	-	-	-.05	-0.7	.485

A stepwise, multiple linear regression was conducted to predict participants' maladaptive eating behaviors based on their lower-order facets of neuroticism and their actual-ideal weight discrepancy. A significant regression equation was found

- $F(1, 233) = 4.591$, $p = .033$ with an R^2 of .019

- Maladaptive Eating Behaviors = 67.255 - .470(Anxiety)

Table 2

Multiple Linear Regression Analysis Summary of the Variables Studied

Variable	B	SE B	β	t	p
Anxiety	-0.47	0.22	-.12	-2.14	.033
Vulnerability	-	-	-.12	-1.77	.078
Angry-Hostility	-	-	.03	0.50	.618
Actual-Ideal Weight Discrepancy	-	-	.03	0.48	.630
Self-Consciousness	-	-	-.03	-0.45	.654
Immoderation	-	-	.02	0.34	.738
Depression	-	-	-.02	-0.27	.789

Table 3

Means, Standard Deviations, and Bivariate Correlations for the Variables Studied (*p < .05)

Variable	M	SD	1	2	3	4	5	6	7
Actual-ideal Weight Discrepancy	1.18	0.90	.20	.09	.09	.32*	-.26*	.10	-.04
1 Maladaptive Eating Behaviors	63.51	6.57		-.14*	-.01	-.08	.04	-.08	-.06
2 Anxiety	7.98	1.95			.30*	.49*	-.10	.38*	-.36*
3 Angry-Hostility	5.35	2.16				.32*	-.21*	.10	-.18*
4 Depression	5.92	2.16					-.17*	.44*	-.34*
5 Immoderation	5.93	1.75						-.10	.15*
6 Self-Consciousness	5.54	2.19							-.35*
7 Vulnerability	6.8	1.86							

Discussion

Supported Hypotheses
- Depression was positively correlated with actual-ideal weight discrepancy
- Anxiety was negatively correlated with maladaptive eating behaviors

Unexpected Findings
- Immoderation was a significant predictor for actual-ideal weight discrepancy
- No significant correlation between actual-ideal weight discrepancy and maladaptive eating behaviors

Limitations
- The IPIP-NEO only includes two questions per lower order facet, so the conclusions could be more predictive if another measure was used

Future Research
- Consider breaking down maladaptive eating behaviors to see if different lower-order facets better predict certain maladaptive eating behaviors (bingeing vs. purging, etc.).
    - The EAT-26 can often diagnose an eating disorder, but does not differentiate between eating disorders

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