

# HOW INVESTMENT IN GENDER IDEALS AFFECTS WELL-BEING: THE ROLE OF EXTERNAL CONTINGENCIES OF SELF-WORTH

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The present study examined the relationship between investment in gender ideals and well-being and the role of external contingencies of self-worth in a longitudinal survey of 677 college freshmen. We propose a model of how investment in gender ideals affects external contingencies and the consequences for self-esteem, depression, and symptoms of disordered eating. Specifically, we find that the negative relationship between investment in gender ideals and well-being is mediated through externally contingent self-worth. The model showed a good fit for the overall sample. Comparative model testing revealed a good fit for men and women as well as White Americans, Asian Americans, and African Americans.

From an early age, boys and girls are taught how to meet the societal ideals for their gender. Messages about how girls should be feminine and boys should be masculine are passed on from communities, parents, and peers to children (Bem, 1983; Bryant & Check, 2000; Bussey & Bandura, 1992; Egan & Perry, 2001; Lott, 1987; Raag, 1998). When people violate gender norms, society views them unfavorably, sending a clear message about gender-role expectations (Bussey & Bandura, 1992; Connell, 1995; Rudman, 1998). Researchers suggest that gender-role socialization plays a primary role in psychological adjustment. Specifically, the pressure for gender conformity that boys and girls experience negatively affects their well-being (Egan & Perry, 2001). Felt pressure from themselves, their peers, and parents to conform to gender ideals predicted lower self-esteem in children (Carver, Younger, & Perry, 2003; Egan & Perry, 2001); however, this research has not ex-

plored the processes responsible for this relationship. The present study sought to explore the relationship between adult investment in gender ideals and psychological well-being. We propose that greater investment in gender ideals indirectly predicts poor psychological well-being through external contingencies of self-worth.

*Investment in gender ideals* refers to the extent to which an individual believes it is important to be similar to the ideal for their gender (Wood, Christensen, Hebl, & Rothgerber, 1997). Investment in gender ideals is similar to felt pressure to meet gender ideals because both pressure and investment refer to felt demands to meet gender ideals—either specifically self-imposed demands in the case of investment, or demands from the self and others, in the case of research on felt pressure (Carver et al., 2003; Egan & Perry, 2001; Wood et al., 1997).<sup>1</sup> The term *external contingencies of self-worth* refers to self-esteem that requires external validation, such as basing self-esteem on appearance or others' approval (Crocker, Luhtanen, Cooper, & Bouvrette, 2003).

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Jennifer Crocker was supported by National Institute of Mental Health grants R01 MH58869 and K02 MH01747, and Diana Sanchez was supported by a Ford Foundation graduate fellowship during the preparation of this manuscript.

We would like to thank Riia Luhtanen and Alexandra Bouvrette for their help in the collection of the ATCP data used in the present study. We would also like to thank Amiram Vinokur and David Perry for their helpful comments during the preparation of the manuscript.

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## *Investment in Gender Ideals and Well-Being*

By the age of 11, boys and girls understand and conceive of themselves as gendered persons and can indicate how well they fit into their gender category as well as how important they believe it is to adhere to gender stereotypes (Egan & Perry, 2001). Not everyone believes that it is important to adhere to gender norms and stereotypes; children and adults vary in the extent that they invest in gender ideals (Carver et al., 2003; Egan & Perry, 2001; Wood et al., 1997). People who invest in gender ideals believe it is personally important to conform to gender norms and expectations

and often express gender-role consistency. For example, girls' investment in gender ideals predicts greater communal behavior and traits (e.g., showing emotions, babysitting, and helping friends; Egan & Perry, 2001) which is consistent with the gender-role expectation that women should be nurturing and relationship-oriented (Cross & Madson, 1997; Eagly & Mladinic, 1989; Lott, 1987). Recent evidence suggests that college-age adults who invest in gender ideals also self-regulate in accordance with traditional ideals (Guerrero-Witt, Wood, & Kashy, 2004; Wood et al., 1997). Diary study results suggest that women self-regulate their daily behavior to be consistent with traditional definitions of femininity, especially when behavior is related to romance (Guerrero-Witt et al., 2004).

The proposition that investment in gender ideals may have negative consequences for adolescents is consistent with several theoretical perspectives (e.g., Bussey & Bandura, 1992; Bem, 1983). Egan and Perry (2001) propose that children who invest in gender ideals feel conditional support, which is a predictor of low self-esteem and depression (Harter, 1998; Rogers, 1951; Winnicot, 1965). We extend this contention to say that those who invest in gender ideals come to define their worth through external sources, which promotes fragile self-esteem and vulnerability to depression. In other words, we argue that by early adulthood, perceived conditional support, that is, the feeling that support from others depends on meeting certain standards, is internalized so that self-worth becomes dependent on approval from others. Investment in gender ideals is harmful to well-being because it places one's worth as a person at the mercy of others' approval and appearance.

### *External Contingencies*

Contingencies of self-worth represent people's beliefs about what they must be or do to have value and worth as a person. Among college students, self-esteem is often contingent on at least one of seven domains, which fall on a continuum from external to internal: other's approval, appearance, competition, academic competence, family support, virtue, and God's love (Crocker et al., 2003). Because external contingencies place self-esteem at the mercy of other people, they lead to vulnerable self-esteem (Crocker et al., 2003).

Basing self-worth on external sources or superficial aspects of the self, such as physical appearance or others' approval, is related to more negative psychological outcomes than basing it on more internal or intrinsic aspects of the self, such as being a virtuous person (Crocker, 2002a; Luhtanen & Crocker, in press; Pyszczynski, Greenberg, & Goldenberg, 2003). Self-esteem that requires external validation is easily threatened and, consequently, tends to be low (Crocker, 2002b; Crocker & Wolfe, 2001), and unstable (Kernis & Waschull, 1995). Instability of self-esteem, in turn, leads to increases in depressive symptoms, elevated stress, and instability of perceived control over events

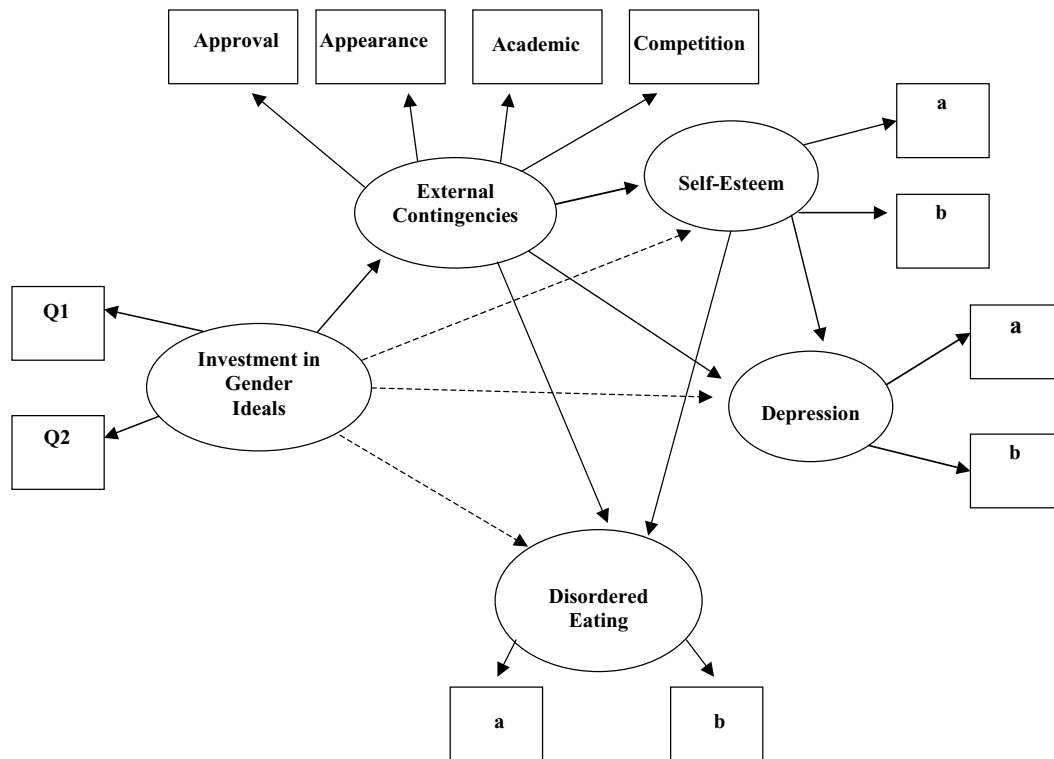
(Crocker & Luhtanen, 2003; Gable & Nezlek, 1998; Roberts & Gotlib, 1997; Roberts, Kassel, & Gotlib, 1995). Lack of perceived control over life events and elevated stress have been found to predispose individuals to disordered eating (Dagleish et al., 2001; Lacey, Coker, & Birchnell, 1986; Schmidt, Tiller, Blanchard, Andrews, & Treasure, 1997; Slade, 1982). Therefore, people whose self-esteem is externally contingent may be vulnerable to a host of poor mental health outcomes (Beck, Epstein, Harrison, & Emery, 1983; Bibring, 1953; Blatt, Quinlan, Chevron, McDonald, & Zuroff, 1982; Blatt & Shichman, 1983; Higgins, 1987). Thus, we hypothesize that people who are invested in gender ideals have poor mental well-being because they have externally contingent self-worth, basing their self-esteem on domains that require external validation such as appearance, others' approval, defeating others in competition, and academic competence (Crocker et al., 2003).

### *Gender Differences*

Gender ideals differ for men and women; women are expected to be feminine while men are expected to be masculine. For men, investing in gender ideals may be associated with better psychological well-being in comparison to women because the gender ideal for men is more culturally valued (Connell, 1995; Cook, 1985; Hearn, 2004; Swim, 1994; Yager & Baker, 1979). Consistent with this hypothesis, previous research finds that endorsement of masculine traits is associated with better psychological adjustment (see Bassoff & Glass, 1982; Whitley, 1983). Additionally, Egan and Perry (2001) found that investment in gender ideals negatively affected the self-esteem of girls and not boys.

Despite the finding that investment in gender ideals does not negatively affect boys, we hypothesize that, among college students, investment in gender ideals will negatively predict well-being for men as well as women. Although gender ideals for men are more culturally valued, the pressure of investment may be similar in other respects for men and women. Being invested in an ideal imposed by society may be harmful, regardless of whether or not the ideal itself is culturally valued. The experience of being invested in gender ideals may be psychologically stressful for both men and women because these ideals are socially imposed, difficult to constantly self-regulate in accordance to, and linked to externally contingent self-worth, which makes investment problematic for both men and women.

Given the strong emphasis on women's appearance (Frederickson & Roberts, 1997), we do predict that investment in gender ideals will uniquely affect disordered eating for women. Based on the higher prevalence of eating disorders among women and the difference in ideal body types for women (e.g., thin) and men (e.g., muscular), we propose that investment in gender ideals will have a stronger relationship to women's disordered eating in comparison to men.



**Fig. 1.** The theoretical model. In the figure, the dashed lines represent hypothesized mediational paths. Symbols (a) and (b) represent the randomly determined parcels for the underlying factors. Q1 and 2 represent the two questions indicating investment in gender ideals.

### Racial Differences

Another goal of this study is to determine whether the same model of investment in gender ideals and well-being holds for African American, Asian American, and White American participants. Some research suggests that different racial groups hold different beliefs about what constitutes the ideal man and woman (de Leon, 1993; Harris, 1996; Hunter & Davis, 1992; Perez-Strumolo, 2003). Investment in gender ideals may therefore have different mental health consequences across ethnic groups. On the other hand, investment in gender ideals, regardless of what attributes constitute the ideal, may have negative mental health consequences for all racial groups because the gender ideal restricts human behavior (Hyde, 1996) and encourages people to evaluate their self-worth through the eyes of others.

Unlike previous studies, the present study is not concerned with the content of the gender ideal per se; we are primarily interested in the personal importance of achieving and maintaining gender ideals. This approach allows us to compare the relative effects of valuing gender ideals while allowing people from different racial backgrounds to personally define the ideal, recognizing that gender is socially constructed with different meanings in varying racial, cultural, and social contexts (see Butler, 1990, 1993; de Beauvoir, 1953; Stewart, 1998), while allowing us to compare the consequences across groups.

### Overview of the Present Study

We hypothesized a model of well-being in which personal investment in gender ideals indirectly predicts lower self-esteem, higher rates of depression, and increased symptoms of disordered eating through external contingencies of self-worth (see Figure 1). In the model, we included paths from self-esteem to depression and disordered eating because self-esteem is a widely recognized contributor to these outcomes (Beck, 1967; Butler, Hokanson, & Flynn, 1994; Crandall, 1973). We also performed exploratory analyses using structural equation modeling to test whether the same model fit the data for men and women, and African American, Asian American, and White Americans.

## METHOD

### Participants and Procedure

Incoming college freshmen (343 females, 451 males, and 1 of unknown gender) were recruited at Freshmen Orientation for a longitudinal study called "The Adjustment to College Project" and received \$50 for participating in three waves of data collection. The present study reports on measures used in Times 1 and 2 data collection and thus includes only participants who completed measures at both Times 1 and 2. The Time 1 data set included 331 White/European Americans, 150 African Americans,

296 Asian/Asian Americans, 17 Multiracials, and 1 unknown (age range 16–22 years old,  $M = 17.78$ ). Of the 795 participants at Time 1, 677 (85%) participated at Time 2 (404 females and 273 males). The Time 2 data set includes 293 White/European Americans, 165 Asian Americans, 123 African Americans, 81 Asian Non-Americans, and 15 Multiracials. Data at each wave were either completed online as a Web-based survey or if the Internet was unavailable to students, on paper. The Time 1 survey was completed in August of 1999, prior to the start of the freshmen year at college. The Time 2 data were collected at the beginning of the second semester at college. Additional details of the sample at each wave of data collection are reported elsewhere (Crocker et al., 2003).

### Materials

*Investment in gender ideals.* Investment in gender ideals was assessed with the two-item measure developed by Wood et al. (1997).<sup>2</sup> The two items assessed on a scale of 1 (*not at all*) to 9 (*a great deal*) how personally important it is to be similar to the ideal man or woman. Participants were instructed to think of how society defines the ideal man and woman. For female participants the questions read as follows: (a) “How important is it for you to be similar to the ideal woman?” (factor loading = .92); (b) “To what extent is being similar to the ideal woman an important part of who you are?” (factor loading = .86). For male participants, the questions referred to the ideal man. In the present study, the measure was highly reliable ( $\alpha = .88$ ).

*Global self-esteem.* Self-esteem was assessed with the widely used and well-validated Rosenberg Self-Esteem Inventory (Rosenberg, 1965) which consists of 10 items rated on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*). In the present study, the measure was reliable for men ( $\alpha = .87$ ), women ( $\alpha = .88$ ), and the overall sample ( $\alpha = .88$ ). We randomly divided the scale into two indicators ( $\alpha = .91$ ; factor loadings = .91 and .93), in a procedure commonly referred to as parceling. Parceling improves the goodness of fit and reduces bias in estimations of structural parameters in comparison to individual item use (Bandalos, 2002).

*Depression.* Depression was assessed with the Center for Epidemiological Studies Depression scale (Radloff, 1977). The 20-item scale was anchored on a scale from 1 (*rarely*) to 4 (*most of the time*) and was reliable for men ( $\alpha = .85$ ), women ( $\alpha = .86$ ), and the overall sample ( $\alpha = .86$ ). We randomly divided the scale into two indicators ( $\alpha = .78$ ; factor loadings = .72 and .97).

*Disordered eating.* Symptoms of disordered eating were assessed with nine items used in previous research on eating disorders (see Thelen, Farmer, Wonderlich, &

Smith, 1991; Williamson, Anderson, Jackman, & Jackson, 1995). Participants were asked to consider the past semester and respond to the following questions on a scale from 0 to 5 (0 = never, 1 = rarely, 2 = sometimes, 3 = often, 4 = very often, 5 = always): “How often did you avoid eating when you were hungry?”; “How often were you aware of the calorie content of foods that you ate?”; “How often were you dieting?”; and “How often were you preoccupied with your weight and/or body shape, or about gaining weight?” The following questions were based on a scale of 0 (*never*) to 5 (*more than twice a week*): “How often did you try to control your weight by eating little or no food for a day or longer?” and “How often did you rapidly eat a very large amount of food (binge)?” The measure also included the following questions on a scale of 0 to 5 (0 = never, 1 = once a month or less, 2 = 2–3 times a month, 3 = once a week, 4 = twice a week, 5 = more than twice a week): “How often did you exercise vigorously and for long periods of time in order to burn calories or to counteract the effects of eating?” and “How often did you use laxatives, diuretics (water pills) and/or suppositories to help control your weight or to lose weight?” Finally, the last question, “How often did you intentionally vomit after eating?” was scaled from 0 (*never*) to 5 (*2 or more times a week*). Because items were anchored with different values, we standardized the items using  $z$ -scores before averaging them ( $\alpha = .81$ ). The scale was also reliable for men ( $\alpha = .76$ ) and women ( $\alpha = .82$ ). We randomly divided the scale into two indicators ( $\alpha = .84$ ; factor loadings = .81 and .90).

*External contingencies of self-worth.* This variable was assessed with the 35-item Contingencies of Self-Worth Scale (CSWS; Crocker et al., 2003). The CSWS consists of seven 5-item subscales that assess the extent to which self-esteem is contingent on appearance (e.g., “My self-esteem does not depend on whether or not I feel attractive”), academic competence (e.g., “How well I perform academically is related to my sense of self-worth”), approval from others (e.g., “My self-esteem depends on the opinions others hold of me”), competition (e.g., “I would feel worthwhile if I performed better than others on a task or skill”), religious faith (“I feel worthwhile when I have God’s love”), family support (e.g., “It is important to my self-respect that I have a family that cares about me”), and virtue (e.g., “My self-esteem would suffer if I did something unethical”). Responses were assessed on a 7-point scale from 1 (*strongly disagree*) to 7 (*strongly agree*). The CSWS subscales have good test-retest reliability and convergent and divergent validity with other measures and predict various behaviors (Crocker et al., 2003).

To check for an underlying factor in the CSWS comprising external sources of self-worth, we factor analyzed all subscales using principle axis factoring with oblimin rotation ( $\Delta = 0$ ) to obtain a simple structure and allow the subscales to be correlated with each other (Rennie, 1997).

Evaluation of the screen plot revealed two factors (eigenvalues > 1.0) explaining 58% of the variance, one consisting of external contingencies (appearance, approval, competition, and academics) and one consisting of internal factors (virtue and religious faith) with family support loading on both factors (Crocker et al., 2003). In the structural model, we used the average scores on the appearance (factor loading = .71), approval (factor loading = .66), competition (factor loading = .60), and academic competence (factor loading = .54) contingencies to indicate external contingencies.<sup>3</sup> The subscales had acceptable reliability, with an overall Cronbach's alpha of .72 (men's  $\alpha$  = .76; women's  $\alpha$  = .70).

**RESULTS**

Table 1 presents the means, standard deviations, and zero-order correlations among all of the indicators of each hypothesized underlying factor and dependent variable (self-esteem, depression, and symptoms of disordered eating) for the overall sample. Tables 2 and 3 show the means, standard deviations, and zero-order correlations separately for men and women, African Americans, White Americans, and Asian Americans. Table 4 shows the group differences found between men and women, and the different racial groups.

We tested the hypothesized model by confirmatory latent-variable structural analyses using EQS computer software, which allows us to test paths between our predictor variables and our multiple dependent variables simultaneously (Klem, 2000). Furthermore, it allows us to test direct and indirect effects. We predicted that investment in gender ideals indirectly would predict lowered self-esteem, higher rates of depression, and more symptoms of disordered eating primarily through external contingencies of self-worth. Because external contingencies are a relatively new concept, we provide an initial factor analysis as well as a structural analysis to confirm the underlying factor. We focus on the structural model but it is important to recognize that the measurement model must fit the data well to produce a good-fitting structural model. Some other advantages of structural equation modeling include its ability to take into account measurement error (Klem, 2000).

In the following analyses, we tested the structural model on the entire sample and performed multiple group comparisons between gender groups (i.e., men and women) and racial groups (i.e., African American, Asian American, and White American students). The structural models for the multiple group comparisons were performed separately on listwise covariance matrices. In accordance with standard structural equation modeling with EQS software (Raykov, Tomer, & Nesselroade, 1991), we report the following goodness-of-fit indices:  $\chi^2/df$ , normed fit (NFI), nonnormed fit (NNFI), and comparative fit (CFI). Acceptable fit indices exceed .90. We also report the root mean square error of approximation (RMSEA) as well as the

**Table 1**  
Matrix of Correlations, Means, and Standard Deviations for Entire Sample (N = 666)

	1	2	3	4	5	6	7	8	9	10	11	12
1. Investment (a)	1.00											
2. Investment (b)	0.79**	1.00										
3. BSE Approval	0.35**	0.32**	1.00									
4. BSE Appearance	0.33**	0.29**	0.49**	1.00								
5. BSE Competition	0.25**	0.25**	0.34**	0.40**	1.00							
6. BSE Academic	0.22**	0.19**	0.32**	0.35**	0.49**	1.00						
7. Self-Esteem (a)	-0.12**	-0.15**	-0.17**	-0.19**	-0.07*	0.01	1.00					
8. Self-Esteem (b)	-0.15**	-0.19**	-0.26**	-0.23**	-0.06*	-0.05	0.84**	1.00				
9. Depression (a)	0.13**	0.14**	0.12**	0.15**	-0.01	0.04	-0.44**	-0.45**	1.00			
10. Depression (b)	0.12**	0.14**	0.10**	0.15**	0.02	0.05	-0.60**	-0.60**	-0.70**	1.00		
11. Disordered Eating(a)	0.13**	0.14**	0.13**	0.22**	0.05	0.03	-0.16**	-0.19**	0.16**	0.11**	1.00	
12. Disordered Eating(b)	0.12**	0.15**	0.15**	0.28**	0.07	0.07	-0.15**	-0.19**	0.12**	0.10*	0.73**	1.00
Means	5.29	4.32	4.42	5.13	5.11	5.56	5.66	5.50	1.52	1.66	0.00	0.00
Standard Deviations	2.09	2.04	1.19	0.98	0.98	0.81	0.99	0.98	0.36	0.51	0.67	0.69

Note. Scores on Disordered Eating items were z-scored. Many scales were divided into two indicators. Symbols (a) and (b) are used to distinguish between the two indicators of one factor. For example, self-esteem (a) is one of the two indicators for the latent factor self-esteem in the structural equation model.  
\*\*p < .01. \*p < .05.

**Table 2**  
Matrix of Correlations, Means, Standard Deviations, and Factor Loadings by Gender

	1	2	3	4	5	6	7	8	9	10	11	12
1. Investment (a)	1.00	0.76**	0.37**	0.38**	0.25**	0.18**	-0.16**	-0.17**	0.17**	0.14**	0.20**	0.18**
2. Investment (b)	0.81**	1.00	0.37**	0.33**	0.24**	0.17**	-0.16**	-0.19**	0.13**	0.12*	0.18**	0.20**
3. BSE Approval	0.34**	0.27**	1.00	0.45**	0.33**	0.28**	-0.19**	-0.24**	0.10 <sup>+</sup>	0.08	0.15**	0.17**
4. BSE Appearance	0.30**	0.29**	0.52**	1.00	0.43**	0.33**	-0.22**	-0.25**	0.13*	0.16**	0.19**	0.25**
5. BSE Competition	0.30**	0.27**	0.43**	0.43**	1.00	0.49**	-0.14**	-0.12*	0.00	0.05	0.07	0.09
6. BSE Academic	0.29**	0.25**	0.39**	0.31**	0.56**	1.00	-0.01	-0.04	0.01	0.02	-0.01	-0.03
7. Self-Esteem (a)	-0.05	-0.10 <sup>+</sup>	-0.13*	-0.09	-0.04	0.01	1.00	0.84**	-0.44**	-0.60**	-0.17**	-0.15**
8. Self-Esteem (b)	-0.12*	-0.16*	-0.27**	-0.16*	-0.05	-0.08	0.83**	1.00	-0.43**	-0.59**	-0.20**	-0.21**
9. Depression (a)	0.11*	0.17**	0.16**	0.14*	-0.02	0.07	-0.44**	-0.45**	1.00	0.68**	0.16**	0.09 <sup>+</sup>
10. Depression (b)	0.11 <sup>+</sup>	0.18**	0.14**	0.09	0.02	0.06	-0.61**	-0.62**	-0.67**	1.00	0.08 <sup>+</sup>	0.07
11. Disordered Eating(a)	0.06	0.12 <sup>+</sup>	0.07	0.21**	0.09	0.03	-0.16**	-0.16**	0.17**	0.11 <sup>+</sup>	1.00	0.74**
12. Disordered Eating(b)	0.02	0.11 <sup>+</sup>	0.07	0.23**	0.15**	0.03	-0.09	-0.09	0.16**	0.10 <sup>+</sup>	0.66**	1.00
Means for Males	5.36	4.48	4.36	4.95	5.25	5.43	5.73	5.59	1.49	1.61	-0.16	-0.20
Standard Deviations for Males	2.18	2.12	1.16	0.92	0.88	0.84	0.98	0.90	0.34	0.47	0.58	0.58
Means for Females	5.24	4.18	4.48	5.26	5.02	5.66	5.63	5.47	1.54	1.68	0.10	0.13
Standard Deviations for Females	2.02	1.98	1.20	0.99	1.04	0.77	0.96	0.99	0.36	0.52	0.73	0.72

*Note.* Males are located below the diagonal. Females are located above the diagonal. Scores on Disordered Eating items were z-scored. Many scales were divided into two indicators. Symbols (a) and (b) are used to distinguish between the two indicators of one factor. For example, self-esteem (a) is one of the two indicators for the latent factor self-esteem in the structural equation model.

\*\* $p < .01$ . \* $p < .05$ . <sup>+</sup> $p < .10$ .

confidence interval of the RMSEA. RMSEA misfit indices should be at or below .06 (Hu & Bentler, 1999). Although  $\chi^2$  is not considered a good index for tests of fit because of its sensitivity to sample size, we report  $\chi^2$  to make comparisons between nested models (Klem, 2000).

*Analyses for Total Sample*

*Direct effect models.* To test mediation, we had to first determine that a direct relationship existed between investment and the hypothesized outcomes (self-esteem, depression, and disordered eating; Baron & Kenny, 1986). In the direct effects models, we performed three preliminary nested models, excluding the path from investment in gender ideals to external contingencies and external contingencies to each outcome (see Table 5). Investment in gender ideals significantly predicted lower self-esteem ( $\beta = -.19$ ) and greater symptoms of disordered eating ( $\beta = .14$ ) before the external contingencies variable was added to the model.

*Full model.* In our full model, we tested the remaining rules of mediation set forth by Baron and Kenny (1986). Mediation relationships would be indicated when we found significant direct relationships in our full model between (a) investment in gender ideals (predictor) and the mediator (external contingencies) and (b) the mediator (external contingencies) and the outcome variables (self-esteem, depression, and symptoms of disordered eating). Finally, to demonstrate full mediation, the full structural model must show a nonsignificant relationship between investment in gender ideals and the outcome variables when external contingencies are included as well as superior fit to the data than all the previously tested models.

As expected, external contingencies mediated the relationship between investment in gender ideals and the outcome variables. Investment in gender ideals was positively associated with external contingencies ( $\beta = .50$ ). External contingencies were negatively associated with self-esteem ( $\beta = -.22$ ) and positively associated with symptoms of disordered eating ( $\beta = .21$ ). Investment in gender ideals did not significantly predict any of the outcomes in the full model, which indicates that the presence of external contingencies in the full model could account for the relationship between investment and the outcomes in the direct model. However, external contingencies did not directly affect depressive symptoms. Instead, external contingencies affected depressive symptoms indirectly through the negative relationship between self-esteem and depression ( $\beta = -.68$ ). All other paths were consistent with our hypotheses.

The full model based on the total sample fit the data well,  $\chi^2(45) = 166.22$ ,  $\chi^2/df = 3.69$ , NFI = .95, NNFI = .95, CFI = .97, and RMSEA = .06 CI (.05, .07). The overall model explained 25% of the variance in external contingencies of self-worth, 7% of the variance in self-esteem,

**Table 3**  
Matrix of Correlations, Means, and Standard Deviations by Race (African, Asian, and White Americans)

	1	2	3	4	5	6	7	8	9	10	11	12
1. Investment (a)	1.00	0.76**	0.37**	0.38**	0.25**	0.18**	-0.16**	-0.17**	0.17**	0.14	0.20**	0.18**
2. Investment (b)	0.85**	1.00	0.37**	0.33**	0.24**	0.17**	-0.16**	-0.19**	0.13**	0.12**	0.18**	0.20**
3. BSE Approval	0.75**	0.35**	1.00	0.45**	0.33**	0.28**	-0.19**	-0.24**	0.10 <sup>+</sup>	0.08	0.15**	0.17**
4. BSE Appearance	0.26**	0.27**	0.43**	1.00	0.43**	0.33**	-0.22**	-0.25**	0.13*	0.16**	0.19**	0.25**
5. BSE Competition	0.24**	0.23**	0.51**	0.55**	1.00	0.49**	-0.14**	-0.12*	0.00	0.05	0.07	0.09
6. BSE Academic	0.22**	0.21*	0.43**	0.43**	1.00	1.00	0.54**	0.01	0.01	0.02	-0.01	-0.03
7. Self-Esteem (a)	0.24**	0.19*	0.33**	0.40**	0.54**	1.00	0.84**	1.00	-0.44**	-0.60**	-0.17**	-0.15**
8. Self-Esteem (b)	0.23**	0.23**	0.35**	0.34**	0.44**	1.00	1.00	1.00	-0.43**	-0.59**	-0.20**	-0.21**
9. Depression (a)	-0.13	-0.08	-0.18**	-0.32**	-0.25**	-0.15	1.00	0.84**	1.00	0.68**	0.16**	0.09 <sup>+</sup>
10. Depression (b)	-0.17**	-0.23**	-0.25**	-0.22**	-0.11	0.09	1.00	1.00	1.00	1.00	0.08 <sup>+</sup>	0.07
11. Disordered Eating (a)	-0.14	-0.12	-0.32**	-0.36**	-0.29**	-0.16*	0.84**	1.00	0.15	0.09	1.00	0.74**
12. Disordered Eating (b)	-0.20**	-0.28**	-0.32**	-0.27**	-0.11	-0.11	0.86**	1.00	-0.26**	0.25**	1.00	1.00
M for African Americans	4.98	4.15	3.67	5.01	4.78	5.47	5.80	5.66	1.55	1.72	-0.01	-0.15
SD for African Americans	2.26	2.20	1.38	1.24	0.91	0.84	0.98	1.02	0.33	0.55	0.66	0.63
M for White Americans	5.33	4.27	4.66	5.23	5.17	5.63	5.77	5.57	1.50	1.57	0.00	0.01
SD for White Americans	2.03	2.05	1.02	0.88	0.93	0.76	0.86	0.88	0.33	0.47	0.70	0.68
M for Asian Americans	5.35	4.37	4.58	5.15	5.13	5.61	5.48	5.34	1.52	1.67	0.00	0.00
SD for Asian Americans	1.96	1.79	1.09	0.87	0.87	0.79	1.04	1.02	0.40	0.50	0.64	0.65

Note. African Americans are located below the diagonal. White Americans are located above the diagonal. Asian Americans appear in bolded text. Scores on Disordered Eating items were z-scored on the entire data set. Many scales were divided into two indicators. Symbols (a) and (b) are used to distinguish between the two indicators of one factor. For example, self-esteem (a) is one of the two indicators for the latent factor self-esteem in the structural equation model.

\*\*p < .01. \*p < .05. +p < .10.

**Table 4**  
Group Differences for Investment, External Contingencies, and Well-Being Outcomes

	Women	Men	Gender Difference ( <i>t</i> )	African Americans	Asian Americans	White Americans	Race Difference ( <i>F</i> )
Investment	4.69	4.93	1.64, <i>ns</i>	4.48 <sub>a</sub>	4.96 <sub>a</sub>	4.78	2.95*
External Contingencies	5.09	4.96	-2.48*	4.69 <sub>a,b</sub>	5.06 <sub>a</sub>	5.17 <sub>b</sub>	12.14***
Competition	5.01	5.19	2.62***	4.74 <sub>a,b</sub>	5.19 <sub>a</sub>	5.15 <sub>b</sub>	12.12***
Appearance	5.25	4.95	-4.21***	4.95 <sub>a</sub>	5.07 <sub>b</sub>	5.26 <sub>a,b</sub>	6.16***
Academics	5.62	5.39	-3.91***	5.38 <sub>a</sub>	5.49	5.63 <sub>a</sub>	5.02**
Others' Approval	4.47	4.29	-2.10***	3.68 <sub>a,b</sub>	4.50 <sub>a</sub>	4.64 <sub>b</sub>	38.50***
Self-Esteem	5.52	5.61	1.30, <i>ns</i>	5.74 <sub>a</sub>	5.33 <sub>a,b</sub>	5.71 <sub>b</sub>	15.77***
Depression	1.62	1.57	-1.70 <sup>+</sup>	1.63 <sub>a</sub>	1.64 <sub>b</sub>	1.54 <sub>a,b</sub>	6.44**
Symptoms of Disordered Eating	0.12	-0.17	-6.01***	-0.01	.00	-0.00	1.91, <i>ns</i>

Note. All comparisons were made on the group averages. Comparisons were made between men and women, and all three racial groups. For racial group comparisons, means with matching subscripts in a row are significantly different at  $p < .05$ . Mean differences were ascertained from post-hoc Tukey tests. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

46% of the variance in depression, and 10% of the variance in symptoms of disordered eating. The small amount of variance explained for symptoms of disordered eating and self-esteem is not surprising because many other factors contribute to these aspects of well-being that were not measured in this model. The relatively high amount of variance explained for depression is expected given the strong relationship between self-esteem and depression (Beck, 1967; Butler et al., 1994; Crandall, 1973). Figure 2 presents the paths obtained in the hypothesized model. Our full model fit the data better than the direct effects model (see Table 5).

#### Gender Analyses

To test the comparative fit of the model for both men and women, we tested the fit of the covariance matrices for both

men and women (see Table 2) constraining all paths, factor loadings, and covariances to be equal (Bentler, 1989; Byrne, 1994). Because the intent of this article was to examine whether the hypothesized model fit the data well for both men and women, especially concerning the well-being outcome of disordered eating, we examined modification indices to explore whether one or more of the equality constraints should be released to improve the fit of the model.

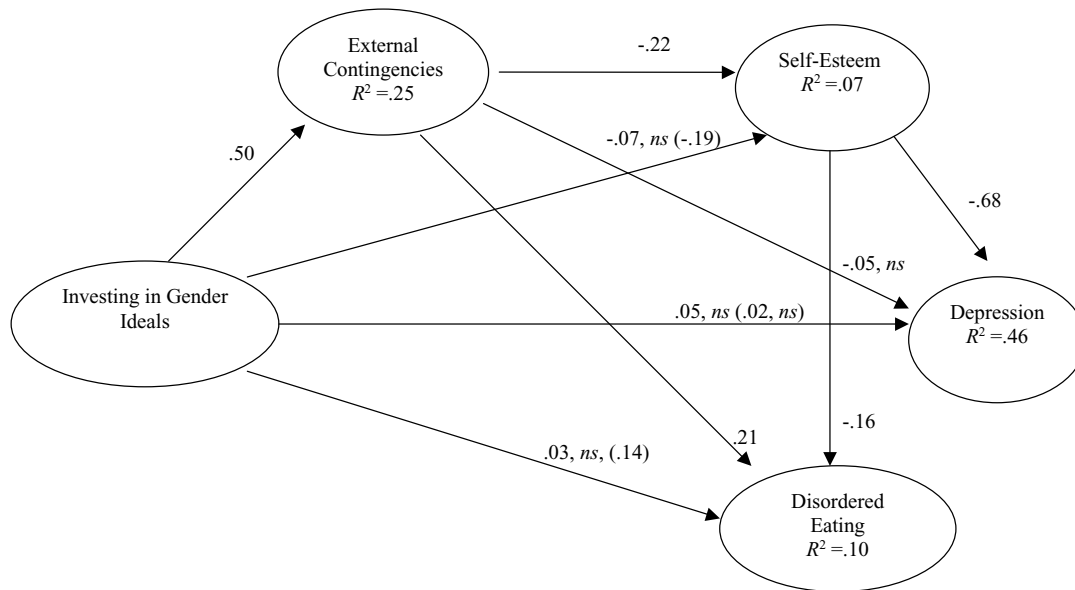
*Direct effect models.* Direct effect analyses are included in Table 5 and resulting betas in Figure 3. Notably, men's investment in gender ideal did not significantly predict symptoms of disordered eating in the direct relationship analyses, which indicates that investment in gender ideals was unrelated to symptoms of disordered eating for men.

**Table 5**  
Fit Statistics and Chi-Square Comparisons for All Models

	Constraints Released	$\chi^2$	<i>df</i>	<i>NFI</i>	<i>NNFI</i>	<i>CFI</i>	<i>RMSEA</i>	$\Delta\chi^2$
Full Model		166.22***	45	.95	.95	.97	.06	
Direct Effects	Self-Esteem	294.24***	47	.92	.90	.93	.09	128.02***
	Depression	281.24***	47	.92	.91	.93	.09	115.02***
	Disordered Eating	292.58***	47	.92	.90	.93	.09	126.36***
Full Model Gender		232.08***	106	.94	.96	.96	.04	
Difference Model <sup>a</sup>		226.56***	105	.94	.96	.97	.04	5.52*
Free Model	All	221.39***	97	.94	.95	.97	.04	10.69, <i>ns</i>
Direct Effects	Self-Esteem	350.46***	107	.90	.92	.93	.06	118.38***
	Depression	342.16***	107	.91	.92	.93	.06	110.08***
	Disordered Eating	349.09***	107	.90	.92	.93	.06	117.08***
Full Model Race		303.52***	160	.91	.94	.95	.04	
Free Model	All	293.10***	142	.91	.93	.95	.04	10.42, <i>ns</i>
Direct Effects	Self-Esteem	432.44***	162	.87	.89	.91	.05	128.92***
	Depression	412.79***	162	.87	.90	.92	.05	109.27***
	Disordered Eating	417.52***	162	.87	.90	.92	.05	114.00***

Note. (a) = The equality constraint from investment to symptoms of disordered eating was released on the Difference Model. Direct effects for the gender comparison model were calculated on the difference model.

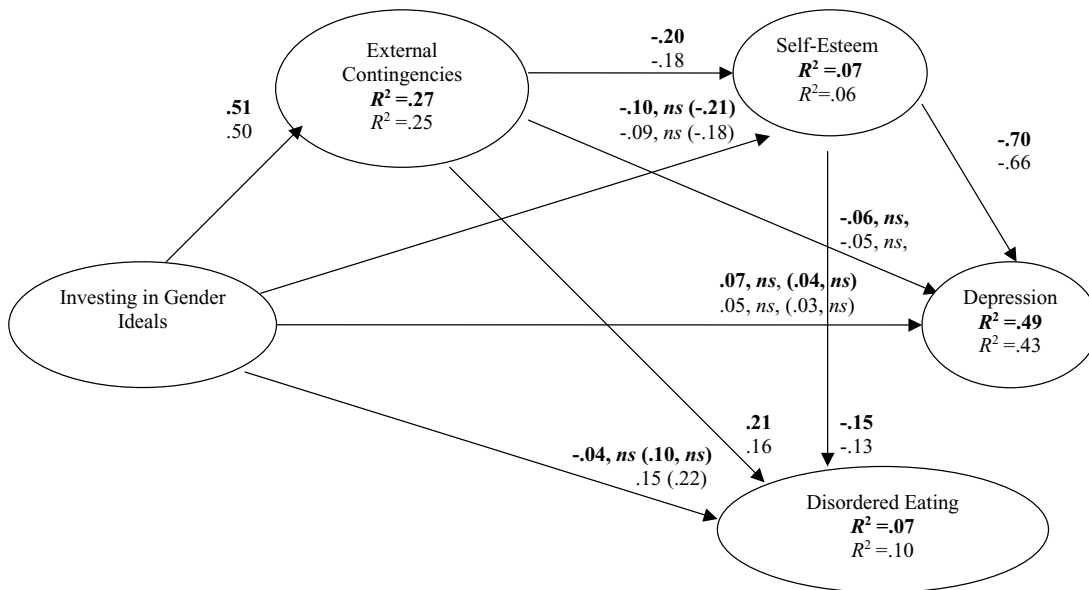
\* $p < .05$ . \*\*\* $p < .001$ .



**Fig. 2.** Structural model results on entire sample. Standardized beta coefficients are shown. The betas in parentheses were found in the structural model of the direct effects of investment. All betas are significant at  $p < .05$  unless otherwise indicated.

*Full model.* The full model analysis provided a good fit to the data,  $\chi^2(106) = 232.08$ ,  $\chi^2/df = 2.19$ , NFI = .94, NNFI = .96, CFI = .96, and RMSEA = .04 CI (.04, .05), which was better than the direct effects model (see Table 5). These results suggest that the model fits the data similarly for men and women. However, as expected, examination of the modification indices suggested a constraint release on the path from investment in gender ideals to symptoms of

disordered eating. Accordingly, we released the constraint between men and women; women’s investment in gender ideals directly affected disordered eating ( $\beta = .15$ ,  $p < .05$ ) while men’s investment in gender ideals did not directly affect disordered eating ( $\beta = -.04$ , *ns*). This model produced a significantly better fit to the data compared to the model with all paths constrained,  $\chi^2(1) = 5.52$ ,  $p < .05$  (see Table 5). These results suggest that although the



**Fig. 3.** Structural model results for men ( $N = 273$ ) and women ( $N = 399$ ). In the figure, the dashed lines represent the hypothesized mediational paths. Standardized beta coefficients are shown. All betas are significant at  $p < .05$  unless otherwise indicated. Betas from direct effect analyses are included in parentheses. Bolded characters refer to males. The equality constraint from investment to symptoms of disordered eating was released.

hypothesized model fits the data well for both men and women, women's investment in gender ideals predicts disordered eating both directly and indirectly through external contingencies, which is not the case for men's investment in gender ideals. However, the hypothesized mediation relationship between investment in gender ideals and external contingencies for self-esteem is the same. Figure 3 presents the paths obtained in the model with this constraint released,  $\chi^2(105) = 226.56$ ,  $\chi^2/df = 2.16$ ,  $NFI = .94$ ,  $NNFI = .96$ ,  $CFI = .97$ , and  $RMSEA = .04$  CI (.04, .05). The final model was compared to the unrestrained model; the difference in  $\chi^2$  was nonsignificant,  $\chi^2(8) = 10.69$  (see Table 5), which indicated that no other constraints should be released.

### Race Analysis

To test the comparative fit of the full model (Figure 1) across the three racial groups, we compared the fit of the covariance matrices to the hypothesized model between African Americans, Asian Americans, and White Americans using the same multigroup procedures as the gender comparison.

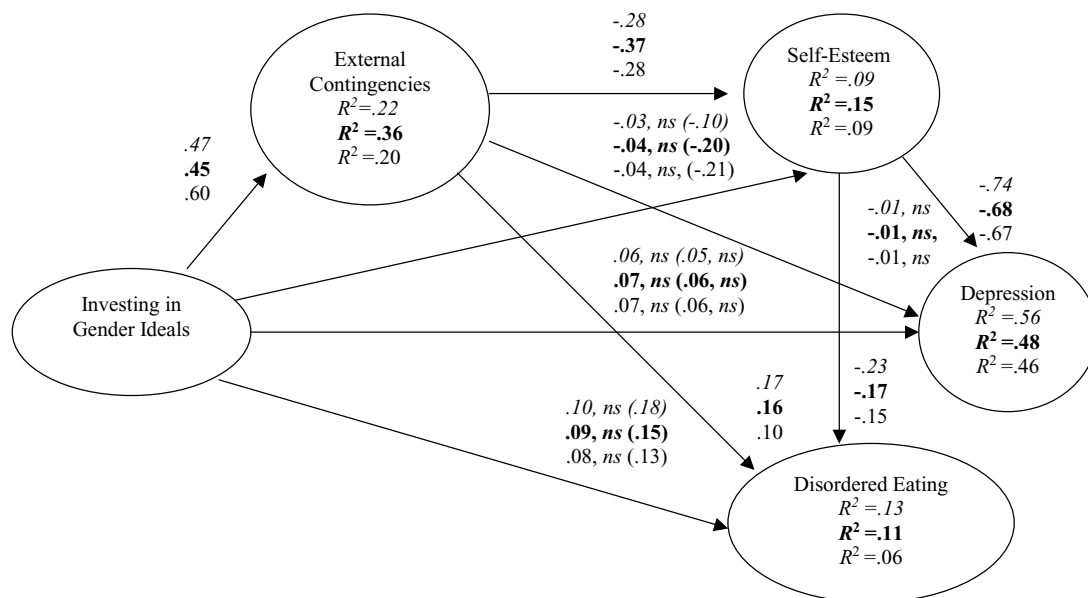
*Direct effect models.* Direct effect analyses are included in Table 5 and betas for the direct effects are shown in Figure 4. As expected, investment in gender ideals significantly predicted the outcomes for all three racial groups in the direct effects model.

*Full model.* Full model results showed that investment in gender ideals no longer predicted the outcomes when

external contingencies were included. External contingencies significantly predicted both self-esteem and disordered eating (see Figure 4). The analysis provided a good fit to the data for all three racial groups,  $\chi^2(160) = 303.52$ ,  $\chi^2/df = 1.89$ ,  $NNFI = .94$ ,  $CFI = .95$ , and  $RMSEA = .04$  CI (.04, .05). These results suggest that the model fits the data similarly for all racial groups. Figure 4 presents the paths obtained in the null model. The final model was compared to an unrestrained model; the difference in chi-square was nonsignificant,  $\chi^2(18) = 10.42$  (see Table 5), indicating that no constraints should be released.

## DISCUSSION

The goals of this study were twofold: (a) to determine whether external contingencies mediate the relationship between investment in gender ideals and three psychological outcomes—self-esteem, depression, and symptoms of disordered eating; and (b) to determine whether the same hypothesized model fit across gender and racial groups. Regarding the first goal, we found that investment in gender ideals indirectly affected self-esteem and symptoms of disordered eating through external contingencies. External contingencies and depressive symptoms were not related directly. Across both gender groups and three racial groups, we found support for our hypothesized model. One important difference was revealed. Women's investment in gender ideals directly affected symptoms of disordered eating, whereas men's investment in gender ideals did not directly affect symptoms of disordered eating.



**Fig. 4.** Structural model results for African Americans ( $N = 122$ ), Asian Americans ( $N = 163$ ), and White Americans ( $N = 290$ ). In the figure, the dashed lines represent the hypothesized mediational paths. Standardized beta coefficients are shown. Betas from direct effect analyses are included in parentheses. All betas are significant at  $p < .05$  unless otherwise indicated. Italic characters refer to Asian Americans (top value). Bolded characters refer to African Americans (middle value). Null model shown.

### *Investment in Gender Ideals and Well-Being*

In our direct effects models that assessed the relationship between investment and well-being, we found that investment negatively predicted self-esteem and disordered eating. This finding provides evidence that investment in traditional ideals persists as a negative predictor of well-being in early adulthood, complementing similar findings for adolescents (Carver et al., 2003; Egan & Perry, 2001). This study extends previous work on adolescents to include multiple indices of well-being. Notably, previous research found that investment was negatively related to self-esteem in adolescent girls but not in adolescent boys (Egan & Perry, 2001); we found that investment in gender ideals negatively affected self-esteem across both gender groups and three racial groups. Although we did not explicitly ask our participants to indicate the prescriptive content of gender ideals in this study, we found that the personal importance of meeting gender ideals emerged as a mental health factor across gender and racial groups because of its association with external contingencies.

### *External Contingencies*

Although previous research has established the link between investment in gender ideals and poor psychological well-being (Egan & Perry, 2001; Carver et al., 2003), to our knowledge no research has established the psychological mechanisms by which investment is problematic. Previous work has also never examined the relationship between investment in gender ideals and basing self-esteem on specific domains of self-worth. The present study provided evidence that investment in gender ideals is associated with greater external contingencies for men and women, African Americans, White Americans, and Asian Americans, and that external contingencies account for part of the relationship between investment and poor psychological well-being. Those who invested in gender ideals believed it was important to meet a societal expectation regarding gender, and thus may believe basing their self-worth on others' views of them provides useful information about how well they are meeting others' expectations. However, our research suggests that evaluating worth externally has negative consequences for well-being.

Building on previous research that suggested that investing in gender ideals negatively affects well-being (Carver et al., 2003; Egan & Perry, 2001), our study goes further to provide evidence that investment in gender ideals indirectly affects well-being through external contingencies. This research suggests that a major mechanism by which investment becomes psychologically problematic could be the development of self-esteem that is fragile and externally dependent. Basing self-esteem on others' approval may have several self-limiting consequences. People who allow others to determine self-worth and value gender ideals may limit themselves to gender-appropriate behaviors and roles such as specific occupations, clothes, and family roles. Even be-

yond the negative consequence of self-restriction to specific activities, invested people may also engage in activities for problematic reasons. People who invest in gender may feel a lack of autonomy that undermines personal joy and satisfaction because they are engaging in activities for extrinsic reasons (see Deci & Ryan, 1995, 2000).

### *Gender Differences*

Overall, we found that the hypothesized model fit the data well for both men and women with the exception of the path from investment in gender ideals to symptoms of disordered eating. We find that the relationship between investment in gender ideals and self-esteem is mediated by external contingencies of self-worth. However, unlike men, women's investment in gender ideals directly predicted symptoms of disordered eating. Because our culture emphasizes women's appearance and body shape (Frederickson & Roberts, 1997), it is not surprising that investment in gender ideals continued to predict disordered eating even when external contingencies were accounted for in the model. This finding suggests that the link between investment and symptoms of disordered eating for women cannot be explained entirely by having self-worth that is externally contingent. Researchers have proposed that perfectionism might account for variance in symptoms of disordered eating (Bastiani, Rao, Weltzin, & Kaye, 1995; Joiner, Heatherton, & Keel, 1997; Vitousek & Manke, 1994). It is possible that women who invest in gender ideals may desire the perfect body to meet society's image of the ideal woman. Women who invest in gender ideals may believe it is important to stay thin and engage in disordered eating behaviors to attain that ideal.

Although men and women were both equally invested in gender ideals, women were slightly more externally contingent than men. This finding is not surprising given women's socialization to be interdependent (Cross & Madson, 1997) and provides a plausible explanation for why women may show lower self-esteem and greater symptoms of disordered eating than men (see Frederickson & Roberts, 1997; Kling, Hyde, Showers, & Buswell, 1999).

### *Racial Differences*

In the present study, we found that the hypothesized model fit the data for African Americans, Asian Americans, and White Americans. We find that the relationship between investment in gender ideals and well-being is mediated through external contingencies of self-worth. The consistency of these findings for the various groups sampled provides strong support for our model. However, mean-level group comparisons suggest that racial differences exist.

African Americans showed lower investment in gender ideals than Asian Americans, and less dependence on external contingencies than Asian Americans and White Americans. African Americans' lower investment in gender

ideals and reliance on external contingencies of self-worth might account for African Americans' better psychological outcomes in previous research (Twenge & Crocker, 2002). Future research should explore why African Americans report less investment in gender ideals by considering the ways that gender is constructed in the African American community (see Harris, 1996).

### Limitations

Although structural equation modeling tests hypothesized causal paths, this analysis is limited by its correlational nature. In the present study, we cannot say with certainty whether investment causes external contingencies, and in turn, leads to poor well-being outcomes. Alternatively, external contingencies or low self-esteem could cause people to become invested in gender ideals. However, forthcoming longitudinal research suggests that the direction is as we have proposed from investment to psychological well-being (Perry, 2004). The issue of causality remains a question for future research. Additionally, our study relies on self-report measures of depression, self-esteem, and investment that might be compromised by social desirability.

Unique to our study, we proposed that investment in gender ideals and external contingencies of self-worth are related constructs and that external contingencies mediate the relation between investment and well-being. Our research does not rule out the possibility that investment and external contingencies of self-worth might be two aspects of the same construct. However, we have reason to believe that they are related, but not identical, constructs. We found moderate correlations between mean levels of investment in gender ideals and external contingencies of self-worth ( $r = .41$ ). Furthermore, our measurement model fit the data well, suggesting that we had little interference with cross-loading manifest variables, supporting the proposition that investment and external contingencies of self-worth are related but not identical.

Our study is limited to a relatively well-adjusted college-age sample and domains of self-worth that are primarily important to them, including academics. Most of the participants scored relatively high on the well-being measures, and the findings may not be generalizable to clinical populations. Our reliance on college student populations might explain why the variance in our model was limited. However, it is important to examine college students because they are at risk for the development of mental health issues. College students have prevalence rates of depression ranging from 16% to 44% (Nagelberg, 1983; O'Neil, 1976; Rosenthal, 2000), with 11% contemplating suicide in the 1995 National College Health Risk Behavior Study.

Consistent with a feminist perspective, this study has attempted to guard against some of the problematic assumptions made by previous gender identity researchers. First, we did not define the gender ideal for our research par-

ticipants. Some feminists have suggested that doing so can reinforce stereotypes and reproduce problematic notions of femininity and masculinity (Morawski, 1998; Spence, 1993). Our conceptualization of investment borrowed from Wood et al. (1997) does not participate in this reproduction; however, this methodological choice has left some questions unanswered. Our data cannot address whether these findings are unique to gender. Perhaps it is just investing in an ideal that is problematic regardless of the nature of the ideal. We might be tapping into the notion of perfectionism when we ask participants to indicate how much they think it is important to meet the ideal. However, we would also not want to presume that people uniformly consider meeting gender ideals as an important way to achieve perfection. Furthermore, burgeoning evidence conducted with the same measure of investment in gender ideals utilizing experimental and diary methodologies suggests that invested people self-regulate their behavior to be gender role consistent (Guerrero-Witt et al., 2004; Wood et al., 1997), suggesting that investment in gender ideals is connected to adherence to gender norms.

### Conclusion

This study replicates and extends previous research on investment in gender ideals (Carver et al., 2003; Egan & Perry, 2001) to include older participants and different well-being measures. This study suggests that external sources of self-esteem account for the relationship between investment and well-being. Although we live in a culture that enforces rigid gender roles and penalizes gender transgressors (Bussey & Bandura, 1992; Connell, 1995; Rudman, 1998), it is possible to resist traditional gender norms. For example, growing numbers of women are entering male-dominated fields (Employment Policy Foundation, 2001). People who are less invested in traditional gender ideals have better psychological outcomes because they are less likely to allow others' opinions, judgments, and performances to determine their self-worth. The process of becoming less invested in gender ideals may require a different framework for determining self-worth that gives greater personal autonomy.

*Initial submission: April 3, 2003*

*Initial acceptance: July 20, 2004*

*Final acceptance: October 6, 2004*

### NOTES

1. Egan and Perry's measure of felt pressure includes both felt pressure from the self as well as from family and peers. We do not suggest that they are identical constructs nor can we speak to the shared psychometric properties of these measures. However, we are compelled nonetheless to treat these concepts similarly because they are intuitively related. Although their measure of felt pressure incorporates self-imposed pressure as well as other-imposed pressure, we believe that investment is strongly tied to external influences.

2. The original measure consisted of a four-item scale that incorporated both being similar to the ideal as well as dissimilar to the opposite sex ideal. In the present study, we focused primarily on investing in being similar to the gender ideal. We tried including dissimilarity and similarity as two indicators of overall investment and found the two scales to be unreliable ( $\alpha < .60$ ). Therefore, we had reason to believe that these were two independent constructs. In this study, we focus on those who believe it is important to be similar to the ideal.
3. The measurement fit was poor on many fit indices,  $< .8$  when family support was included in the model. The factor analysis suggests that basing self-esteem on family support may be an internal source of self-worth. Basing self-esteem on family love may not contribute to unstable self-worth but rather may represent a stabilizing factor. The correlation between family support and self-esteem was positive but weak, which suggested that family support is unlike the other external contingencies ( $r = .095$ ,  $p < .01$ ). The family support measure did not correlate significantly with the other well-being measures (disordered eating and depression).

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