THE DEVELOPMENT OF DISORDERED EATING AMONG FEMALE UNDERGRADUATES: A TEST OF OBJECTIFICATION THEORY

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Objectification theory (Fredrickson & Roberts, 1997) has been used to explain how mechanisms related to socialization, sexual objectification, and psychological variables interact to predict mental health difficulties. Among a sample of 626 undergraduate women (age 18-24), this study empirically tested components of Moradi and Huang’s (2008) model and extended it by including additional socialization experiences (i.e., sexual abuse, societal pressures regarding weight and body size). Structural equation modeling analyses suggested that the model provided a good fit to the data and the model was tested in the confirmatory sample. Across the two samples, high levels of Body Shame and low levels of Internal Bodily Awareness directly led and high levels of Societal Pressures Regarding Weight and Body Size, Internalization of Cultural Standards of Beauty, and Self-objectification indirectly led to increased Bulimic Symptomatology and accounted for 65 to 73% of the variance in Bulimic Symptomatology. A history of sexual abuse and sexual objectification were not consistently supported within the model and do not appear to be as salient as the experience of societal pressures regarding weight and body size in understanding women’s experience of bulimic symptomatology. Implications for practice and future research are discussed.
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INTRODUCTION

Western culture’s female thin-ideal (e.g., slim, young, beautiful) is ubiquitous and thus unavoidable for girls and women (Polivy & Herman, 2004; Stice, 1994, 2002). This ideal is communicated through the media (e.g., TV, magazines) as well as through family and friends and presents an image of women’s bodies that is physically unattainable for most (Fredrickson & Roberts, 1997; Morry & Staska, 2001). Further, in Western cultures, being overweight frequently is perceived as lacking self-control and discipline and anecdotally, women often associate eating patterns with “being good” or “sinning” (Noll & Fredrickson, 1998). Thus, girls are taught that achievement of the thin-ideal is a moral imperative that is reflective of their personality, purity, and inner strength and should be pursued by all, even if their attempts to attain it come at great psychological and physical costs (Noll & Fredrickson, 1998).

Objectification theory provides an organizational framework for understanding how these socialization experiences can increase girls and women’s risk of developing disordered eating behaviors (Fredrickson & Roberts, 1997). Over the last decade, researchers have examined many of the pathways that are part of the objectification model (Muehlenkamp & Saris-Baglama, 2002; Noll & Fredrickson, 1998; Quinn, Kallen, & Cathey, 2006; Slater & Tiggemann, 2002) to better understand women’s risk for developing mental health problems, such as high levels of body shame, low levels of internal bodily awareness, and disordered eating behaviors (Aubrey, 2006; Calogero, 2004; Calogero, Davis, & Thompson, 2005; Grabe, Hyde, & Lindberg, 2007; Greenleaf & McGreer, 2006; Moradi, Dirks, & Matteson, 2005; Muehlenkamp, Swanson, & Brausch, 2005; Syzmanski & Henning, 2007; Tiggemann & Kuring, 2004; Tiggemann & Lynch, 2001; Tiggemann & Slater, 2001).

According to objectification theory, individuals are socialized to view girls and women’s bodies as objects that exist for the pleasure, particularly sexual, of others. Thus, women’s
bodies, or body parts, often become the central or primary feature in their identity. Such sexual objectification often results from media images that suggest women’s appearances are the source of their worth and emphasize that their bodies should reflect social ideals of thinness and attractiveness (Augustus-Horvath & Tylka, 2009). Previous research has found that girls and women in many differing populations encounter sexually objectifying experiences. For example, girls as young as 12 years old (Slater & Tiggemann, 2002) as well as women who are in college (Augustus-Horvath & Tylka, 2009; Kozee & Tylka, 2006; Moradi et al., 2005, Morry & Staska, 2001), women over the age of 25 (Augustus-Horvath & Tylka, 2009), and women who are lesbian (Kozee & Tylka, 2006) have reported experiencing sexual objectification.

Sexual objectification also is hypothesized to occur when girls and women experience objectifying gazes when interacting with others and when they are sexually harassed or sexually assaulted and their bodies are used as instruments by perpetrators (Fredrickson & Roberts, 1997). Visible manifestations of puberty (e.g., breast development) draw increased attention to girls’ bodies and may result in harassment, sexual objectification, and even sexual abuse (Lindberg, Grabe, & Hyde, 2007). Girls and women may experience sexual abuse at any age and abuse can occur in a single episode, across many single episodes, or consistently over time (Kaltman, Krupnick, Stockton, Hooper, & Green, 2005; Street & Arias 2001). Within the college population, rates of reported childhood sexual abuse for women have ranged from 5% (e.g., Amstadter & Vernon, 2008) to 40% (e.g., Follette, Polusny, Bechtle & Naugle, 1996), whereas estimates of sexual abuse that occurred at some point in their lives have ranged from 20% (Brener, McMahon, Warren, & Douglas, 1999) to 60% (Tripp & Petrie, 2001). Because girls and women are unable to control other individuals’ behaviors and gazes, as well as how women are portrayed in the media, they usually are unable to avoid sexually objectifying experiences.
even though they may make attempts to modify their appearance to reduce the likelihood of it occurring (Aubrey, 2006; Fredrickson & Roberts, 1997).

As a result of such sexually objectifying experiences, sexual abuse/harassment, and repeated exposure to societal messages about body shape and appearance, girls and women are hypothesized to internalize ideals about physical attractiveness as well as adopt an observer’s perspective of their physical selves (Fredrickson & Roberts, 1997; Moradi et al., 2005; Morry & Staska, 2001; Thompson & Stice, 2001). When another’s observational perspective is adopted, it is called self-objectification and results in girls and women viewing their own bodies as objects to be evaluated (Fredrickson & Roberts, 1997; Morry & Staska, 2001). The relationship between internalization of the thin ideal and self-objectification has been supported in previous research. For example, Morry and Staska (2001) and Harper and Tiggemann (2008) found that greater exposure to the thin-ideal (i.e., through magazine images) led to increased self-objectification within different samples of female undergraduates. In addition, Calogero et al. (2005) found that internalization of the thin-ideal presented through the media contributed to engaging in self-objectification among women who were seeking in-patient treatment for eating disorders. Girls and women often use this habitual, self-conscious body monitoring as a strategy to help determine how others will perceive and treat them (Fredrickson & Roberts, 1997; Harper & Tiggemann, 2008). When girls and women self-objectify, they become intensely focused on their bodies, believe that their identity and worth is determined primarily by their physical appearance (Calogero et al., 2005; Fredrickson & Roberts, 1997), and experience a range of psychological difficulties, including lower internal bodily awareness, body shame, and ultimately disordered eating (Aubrey, 2007; Fredrickson, Roberts, Noll, Quinn, & Twenge, 1998; Greenleaf & McGreer, 2006; Miner-Rubino, Twenge, & Fredrickson, 2002; Moradi & Huang, 2008).
Internal bodily awareness concerns one’s ability to discriminate between emotions and physical sensations of hunger and satiety (Tylka & Hill, 2004), and women may experience difficulties detecting bodily sensations as a result of feeling isolated from their bodies due to the self-objectification process (Fredrickson & Roberts, 1997; Muehlenkamp & Saris-Baglama, 2002; Quinn et al., 2006). Because psychological resources are taxed during self-objectification, many women also may experience disruption in their cognitive processing that impedes their ability to attend to emotions and physical sensations (Quinn et al., 2006; Fredrickson & Roberts, 1997). Women who self-objectify may be aware of their hunger and/or fullness, but may be less likely to respond to these sensations due to their focus on their outward appearance and concern that they may not meet cultural ideals for thinness (Daubenmier, 2005). In support of this relationship, among a sample of undergraduate women Muehlenkamp and Saris-Baglama (2002) found that engaging in self-objectification was directly related to women’s reduced abilities to identify and explain their emotions to others.

In addition to having difficulties identifying and explaining emotions and physical sensations, women who self-objectify may experience body shame, which can result from failing to meet the internalized cultural standard of physical beauty (Moradi et al., 2005). As girls and women are reminded that they do not meet society’s standards, they may begin to believe that they are socially unacceptable and experience feelings of shame that are directed toward what they believe let them down, their bodies (Fredrickson & Roberts, 1997). Because the shame spurs women to focus on their bodies even more, girls and women may engage in unhealthy eating behaviors in hopes of reducing the shame they feel by changing their bodies to more closely approximate the societal thin-ideal (Noll & Fredrickson, 1998). The combination of a low level of internal bodily awareness and responsiveness and a high level of body shame
resulting from self-objectification may lead to disordered eating, which can undermine girls’ and women’s physical health and psychological well-being (Augustus-Horvath & Tylka, 2009; Calogero et al., 2005; Daubenmier, 2005; Fredrickson et al., 1998; Kozee & Tylka, 2006; Moradi et al., 2005; Moradi & Rottenstein, 2007; Muehlenkamp & Saris-Baglama, 2002; Noll & Fredrickson, 1998; Sanchez & Kwang, 2007; Slater & Tiggemann, 2002; Tylka & Hill, 2004).

Thus, recent research on objectification theory has provided a model that supports these complex relationships and their contributions to the development of disordered eating. In addition to the pathways just described, which are consistent with the model proposed by Moradi and Huang (2008), research has supported a pathway from body shame to internal awareness (Augustus-Horvath & Tylka, 2009; Kozee & Tylka, 2006; Tylka & Hill, 2004). Specifically, women who experience body shame may ignore or suppress their internal bodily cues in hopes of restricting their caloric intake to lose weight and move closer to the thin-ideal (Augustus-Horvath & Tylka, 2009; Kozee & Tylka, 2006; Tylka & Hill, 2004). For example, among samples of undergraduate women, women over the age of 25, and lesbian women, those who experienced high levels of body shame reported low internal awareness (Augustus-Horvath & Tylka, 2009; Kozee & Tylka, 2006; Tylka & Hill, 2004). Furthermore, Tylka and Hill (2004) found that body shame accounted for 53% of the variance in low internal awareness. Although not part of the original pathways proposed by Fredrickson and Roberts (1997) or Moradi and Huang (2008), this relationship has been empirically supported and should be explored in future research in the context of the larger model.

Although Moradi and Huang (2008) provided an integrated model to explain relationships identified within objectification theory, this model has not been tested in total. Thus, a next step would be to test the multiple pathways in the model to understand how
components of objectification theory may interact and be related to disordered eating behaviors. In the current study, I sought to extend and then test the primary components of Moradi and Huang’s (2008) proposed model of objectification. In extending the model, I (a) included other socialization experiences (i.e., societal pressures regarding weight and body size, history of sexual abuse) that were recommended by Moradi (2010) and have been related to the development of disordered eating (Fredrickson & Roberts, 1997; Keery, van den Berg, & Thompson, 2004; Peterson, Paulson, & Williams, 2007; Rodgers & Chabrol, 2009; Shroff & Thompson, 2006; Thompson & Stice, 2001; Twamley & Davis, 1999; Twenge & Fredrickson, 2002; Tripp & Petrie, 2001; Wonderlich et al., 2007), and (b) added a pathway between body shame and internal bodily awareness as supported by the work of Tylka and her colleagues (Augustus-Horvath & Tylka, 2009; Kozee & Tylka, 2006; Tylka & Hill, 2004) (see Figure 1).

Specifically, this study explored two models of sexual objectification. Consistent with theory and existing research (e.g., Fredrickson & Roberts, 1997; Fredrickson et al., 1998; Miner-Rubino et al., 2002), in Model A, I hypothesized that history of sexual abuse would be related to a greater reported frequency of sexually objectifying experiences, and to increased self-objectification. Perceived social pressures concerning the thin-ideal were expected to be related to more sexually objectifying experiences and more internalization of the societal thin ideal. Sexually objectifying experiences were expected to be associated with more internalization and higher levels of self-objectification; internalization was hypothesized to be connected directly to higher levels of body shame and self-objectification. In turn, self-objectification was expected to be related to more body shame and lower levels of internal bodily awareness and responsiveness. Only body shame and a lack of internal awareness were expected to be related directly to bulimic symptomatology. The Model B contained all the pathways of the original model and included a
pathway between body shame and internal bodily awareness. Consistent with recent research (e.g., Augustus-Horvath & Tylka, 2009; Kozee & Tylka, 2006; Tylka & Hill, 2004) I predicted that body shame would lead directly to lower levels of internal bodily awareness and that body shame and low levels of internal awareness would be related directly to bulimic symptomatology.
METHOD
Participants
Participants were 626 female undergraduate students, between the ages of 18 and 24 years of age, drawn from undergraduate psychology classes at a large southwestern university and a small northeastern university. Mean age was 19.95 years ($SD = 1.60$); 64% were Caucasian, 15% African American, 13% Hispanic, 5% Asian American, .3% American Indian, and 3% endorsed “other ethnicity.” Their mean current body mass index (BMI) was 23.74 kg/m$^2$ ($SD = 4.89$) which was within the range of normal weight.

Measures
Social desirability. The 12-item Marlow-Crowne Social Desirability Scale Form B (MCSDS; Reynolds, 1982) measures the degree to which individuals respond in a socially desirable manner (i.e., tendency to underreport information that the individual believes may be viewed negatively or to over report information that may be viewed positively). Participants respond true or false to items. Responses are scored dichotomously and total scores range from 0, low social desirability, to 12, high social desirability. In a sample of female undergraduates, Brannan and Petrie (2008) reported an internal consistency (Kuder-Richardson 20) of .63. Cronbach’s alpha from the current study was .66. In support of its validity, the 12-item scale correlated significantly ($r = .92$) with the 33-item original version of the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960) and the Edwards Social Desirability Scale ($r = .38$; Edwards, 1957).

Sexual abuse. The 5-item Sexual Abuse subscale from the Childhood Trauma Questionnaire (CTQ; Bernstein & Fink, 1998) measures childhood sexual abuse. Participants indicate how often the experience occurred using a 5-point Likert scale ranging from 1, never true to 5, very often true. Total scores are obtained by summing all items and higher scores
indicate a greater frequency of childhood abuse. Internal consistency (Cronbach’s alpha) for this subscale of the CTQ was .94 in a sample of female college students (Tripp & Petrie, 2001). Cronbach’s alpha for the current study was .95. Test-retest reliability over a two to six month interval of the 70-item CTQ was .88 among a sample of individuals being treated for drug or alcohol dependence (Berstein et al., 1994). In support of the CTQ’s convergent validity, Bernstein and Fink (1998) reported that the CTQ is positively correlated with measures of childhood trauma and maltreatment ($r$’s = .58 to .71), in addition to therapist’s ratings of sexual abuse ($r = .75$).

The three-item Validity subscale from the Childhood Trauma Questionnaire (CTQ; Bernstein & Fink, 1998) measures possible denial or underreporting of childhood maltreatment. Participants indicate how often the experience occurred using a 5-point Likert scale ranging from 1, never true to 5, very often true. As recommended by Bernstein and Fink, responses 1, never true, to 4, often true, are transformed to a zero score and 5, very often true, is recoded into a 1. Total scores are obtained by summing all items. Total scores above zero indicate possible denial or underreporting of maltreatment. Cronbach’s alpha from the current study was .76. Individuals with a total score of 3 on the Validity subscale were removed from the analyses due to the likelihood of denial or underreporting of maltreatment.

The 6-item Sexual Abuse subscale from the Sexual Abuse History Questionnaire (SAHQ; Leserman, Drossman, & Li, 1995) measures sexual abuse experiences, particularly focusing on unwanted attempts and contact of the victim’s and/or perpetrators sexual organs that may have occurred before and/or after 14 years of age. Participants indicate if they experienced sexual abuse during each of these time frames (i.e., child, adolescent/adult) and report how often the abuse occurred using a 4-point Likert scale ranging from 0, never to 3, four or more times. Total
scores for abuse experienced as a child or as an adolescent/adult are calculated by summing all
the respective items during each of these time frames. Scores above 0 indicate a history of abuse
and higher scores indicate a greater frequency of abuse. Leserman et al. (1995) reported test-
retest reliability over a 16 month time frame of .81 among a sample of women who were referred
to a gastroenterology clinic. Latimer (2006) reported an internal consistency (Cronbach’s alpha)
of .83 in a sample of female undergraduates. In the current study Cronbach’s alpha was .88 for
both the child and adolescent time frames. When individuals’ scores on the SAHQ were
compared with interviews about abuse history, Leserman et al. (1995) reported sensitivity
(correctly identifying the occurrence of sexual abuse using the questionnaire and an interview) of
.71 and specificity (correctly identifying no occurrence of sexual abuse using the questionnaire
and an interview) of .91.

Social pressures. Based on the work of Stice and his colleagues (Stice & Agras, 1998;
Stice, Ziemba, Margolis, & Flick, 1996), a 28-item perceived sociocultural pressures scale
(PSPS) was developed to measure perceived pressure experienced in seven areas: (1) have a thin
body, (2) lose weight, (3) exercise, (4) be more attractive, (5) have the perfect body, (6) diet, (7)
change one’s appearance. Participants rate the pressure they receive in each area from four
different sources (i.e., family, female friends, boyfriends/partners, and the media) using a 5-point
Likert scale that ranges from 1, never, to 5, always. Total scores are calculated for each area
(e.g., have a thin body) by averaging the ratings from the different sources. Higher scores
indicate greater perceived pressures in that area. Cronbach’s alphas have ranged from .78 to .88
in a sample of female collegiate athletes (Anderson, 2009). Cronbach’s alphas from the current
study ranged from .73 to .78. Anderson (2009) also reported correlations between the seven
pressures and several different measures of disordered eating attitudes and behaviors including:
body satisfaction ($r$’s = .32 to .45), bulimic symptomatology ($r$’s = .37 to .57), eating disordered symptomatology ($r$’s = .29 to .48), internalized societal messages about beauty ($r$’s = .36 to .52), dieting behaviors ($r$’s = .35 to .54), restrained eating ($r$’s = .35 to .52), and perceived sport pressure to lose weight ($r$’s = .28 to .61).

Sexual objectification. The 15-item Interpersonal Sexual Objectification Scale (ISOS; Kozee, Tylka, Augustus-Horvath, & Denchik, 2007) measures interpersonal sexual objectification (e.g., body evaluation, unwanted explicit sexual advances) experienced throughout one’s lifetime. Participants report how often the experiences occurred using a 5-point Likert scale ranging from 1, never, to 5, almost always. A total score is obtained by summing across all items and can range from 15, low, to 75, high. Kozee et al. (2007) reported an internal consistency (Cronbach’s alpha) of .92 and a three-week test-retest reliability of .90 for a sample of college women. Cronbach’s alpha for the current study was .91. In support of construct validity, Kozee et al. (2007) reported the ISOS was correlated positively ($r = .55$) with measures of sexist discrimination measured by the Schedule of Sexist Events (Klonoff & Landrine, 1995), with internalization ($r = .33$) measured by the Sociocultural Attitudes Toward Appearance Questionnaire (Heinberg, Thompson, & Stormer, 1995), and with body surveillance ($r = .30$) and body shame ($r = .25$) measured by the Objectified Body Consciousness Scale (McKinley & Hyde, 1996).

Internalization. The 9-item Internalization-General subscale of the Sociocultural Attitudes Towards Appearance Scale-3 (SATAQ-3; Thompson et al., 2004) measures how much an individual has internalized characteristics of the thin-ideal. Participants respond on a 5-point Likert scale, ranging from 1, definitely disagree, to 5, definitely agree. Total scores are the average of the items; higher scores indicate greater levels of internalization. Thompson et al.
(2004) reported Cronbach’s alpha of .96 in a sample of female undergraduates, which is consistent with the value from the current study (Cronbach’s alpha = .93). In support of its construct validity, the scale correlated with body dissatisfaction ($r = .32$) and drive for thinness ($r = .54$) measured by the Eating Disorders Inventory-2 (EDI-2; Garner, 1991), and endorsement of societal values of attractiveness ($r = .51$), measured by the Ideal-Body Internalization Scale-Revised (IBIS-R; Stice & Agras, 1998).

The 19-item Beliefs About Attractiveness Scale-Revised (BAAR; Petrie, Rogers, Johnson, & Diehl, 1996) measures women’s endorsement of western societal values of attractiveness and beauty along two dimensions: Importance of Being Physically Fit (9 items) and Importance of Being Attractive/Thin (10 items). Participants rate items on a 7-point Likert scale, ranging from 1, strongly disagree, to 7, strongly agree. Total scores are the average for each factor; higher scores indicate greater endorsement of societal values of attractiveness and beauty. Among a sample of female undergraduates, Cronbach’s alphas were .88 (Physically Fit) and .89 (Attractive/Thin) (Petrie et al., 1996). In the current study Cronbach’s alphas were .87 (Physically Fit) and .90 (Attractive/Thin). Petrie et al. (1996) also reported the BAAR factors correlated with the Bulimia Test Revised ($r$’s = .40 to .46; BULIT-R; Thelen, Farmer, Wonderlich, & Smith, 1991), the Body Shape Questionnaire ($r$’s = .42 to .44; BSQ; Cooper, Taylor, Cooper & Fairburn, 1987), the Center for Epidemiologic Studies Depression Scale ($r$’s = .16 to .28; CES-D; Radloff, 1977), and with the Rosenberg Self-Esteem Scale ($r$’s = -.29 to -.32; RSES; Rosenberg, 1965), supporting its validity.

Self-objectification. The 8-item Body Surveillance subscale of the Objectified Body Consciousness Scale (OBCS; McKinley & Hyde, 1996) measures the extent to which women monitor their appearance, how much women think about how they look rather than how they
feel, and the degree to which women adopt an outsider’s view of the self. Responses are given on a 7-point Likert scale ranging from 1, *strongly disagree*, to 7, *strongly agree*. Total scores are the average of the items; higher scores indicate greater body surveillance. McKinley and Hyde (1996) reported internal consistency (Cronbach’s alpha) of .89 and a two-week test-retest reliability of .79 within a female college sample. Cronbach’s alpha in the current study was .81. McKinley and Hyde (1996) reported the Body Surveillance subscale was related to measures of public self-consciousness ($r = .73$), supporting its construct validity.

Body shame. The 8-item Body Shame subscale of the Objectified Body Consciousness Scale (OBCS; McKinley & Hyde, 1996) measures feelings of inadequacy and shame about the self when cultural body standards are not met. Responses are given on a 7-point Likert scale ranging from 1, *strongly disagree*, to 7, *strongly agree*. Total scores are the average of the items; higher scores indicate greater body shame. McKinley and Hyde (1996) reported an internal consistency (Cronbach’s alpha) of .75 and a two-week test-retest reliability of .79 in a sample of female undergraduates. Internal consistency (Cronbach’s alpha) in the current study was .85. McKinley and Hyde (1996) reported the Body Shame subscale was related to measures of body surveillance ($r = .66$), appearance control beliefs ($r = .23$), and body esteem ($r = -.39$), supporting its validity.

A 4-item self-report questionnaire assesses subjective experiences of body shame (Andrews, 1995; Tripp & Petrie, 2001). For each item, such as “I feel ashamed of my body or some part of it,” participants respond using a 5 point Likert scale, ranging from 1, *definitely disagree*, to 5, *definitely agree*. Total scores are the average of the four items; higher scores indicate greater feelings of shame. Cronbach’s alpha was .90 in a sample of female undergraduates (Tripp & Petrie, 2001), which is consistent with the value from the current study.
(Cronbach’s alpha = .91). Tripp and Petrie (2001) reported the questionnaire was related to the Multidimensional Body-Self Relations Questionnaire Appearance Evaluation Factor \( r = -.71 \); MBSRQ-AE; Cash, 1994), the Revised Restraint Scale Weight Fluctuation Factor \( r = .42 \); RRS-WF; Herman & Polivy, 1980), the Revised Restraint Scale Concern for Dieting Factor \( r = .55 \); RRS-CD; Herman & Polivy, 1980), the Body Parts Satisfaction Scale Revised \( r = -.59 \); BPSS-R; Petrie & Austin, 1996), and the BSQ \( r = .75 \); Cooper et al., 1987), supporting its validity.

Internal bodily awareness. The 10-item Interoceptive Awareness subscale of the Eating Disorder Inventory-2 (EDI-2; Garner, 1991) measures confusion and apprehension in accurately recognizing and responding to emotional states and difficulties identifying visceral sensations related to hunger and satiety. Based on previous research with female college samples (e.g., Kozee & Tylka, 2006; Tylka & Hill, 2004; Tylka & Subich, 2004), participants rate items on a 6-point scale ranging from 1, *never true of me*, to 6, *always true of me*. As recommended in previous studies (e.g., Augustus-Horvath & Tylka, 2009; Tylka & Hill, 2004; Tylka & Subich, 2004) total scores were calculated as the sum of the items to prevent range restriction and skewness. Higher scores indicate lower internal bodily awareness. Among female undergraduate samples, internal consistencies (Cronbach’s alpha) have ranged from .81 - .85 (Kozee & Tylka, 2006) and Cronbach’s alpha in the current study was .87. Wear and Pratz (1987) reported a three week test-retest reliability of .85 among a sample of female undergraduates. In support of concurrent validity, Garner (1991) reported a correlation of .51 between client self-reports and therapist ratings of internal awareness. Among a clinical female sample, Garner (1991) reported a correlation of .51 between the Internal Awareness subscale and the EAT-26 (Garner, Olmstead, Bohr, & Garfinkel, 1982) and a correlation of .66 with the
Hopkins Symptom Checklist (HSCL; Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974), supporting its construct validity.

**Bulimic symptomatology.** The 36-item Bulimia Test-Revised (BULIT-R; Thelen, Mintz, & Vander Wal, 1996) measures bulimic behaviors and attitudes. The BULIT-R has 28 scored items that inquire about DSM criteria for BN and 8 unscored items related to weight-control behaviors. Participants respond using a 5-point Likert type scale that ranges from 1, *an absence of difficulties*, to 5, *extreme difficulties*. Total scores range from 28 to 140; higher scores indicate greater bulimic behaviors and attitudes. Thelen et al. (1996) reported an internal consistency (Cronbach’s alpha) of .98 and a correlation of .73 for BULIT-R scores and group membership for a mixed sample of college women and women seeking treatment for BN. Cronbach’s alpha in the current study was .94. Thelen et al. (1996) reported a specificity (correctly identifying no occurrence of bulimic behaviors and attitudes using the questionnaire and a structured diagnostic interview) of .96, a sensitivity (correctly identifying the occurrence of bulimic behaviors and attitudes using the questionnaire and a structured diagnostic interview) of .91, a positive predictive value (the likelihood that the individual will have bulimic behaviors or attitudes when they are detected by the questionnaire) of .81, and a negative predictive value (the likelihood that the individual will not have bulimic behaviors or attitudes when they are not detected by the questionnaire) of .98 for the BULIT-R.

The 26-item Eating Attitudes Test (EAT-26; Garner et al., 1982) measures cognitions, emotions, and behaviors associated with dieting, bulimia and food preoccupation, and oral control. Responses are scored on a 6 point scale ranging from 0, never, to 3, always. As suggested by Garner et al. (1982), the first three nonpathological responses of never, rarely, and sometimes receive a score of 0 and the more pathological responses of often, very often, and
always receive scores of 1, 2, and 3, respectively. Total scores are the sum of all items and can range from 0, no symptoms, to 78, high symptoms. Internal consistency (Cronbach’s alpha) for the EAT-26 has ranged from .83 to .90 in non-clinical samples of women (Garner et al., 1982; Daubenmier, 2005), which is consistent with the value from the current study (Cronbach’s alpha = .90). Mazzeo (1999) reported test-retest reliability over a three-week period of .86 in a sample of female undergraduates. Among a sample of college women, Brookings and Wilson (1994) reported the EAT-26 had a .55 correlation with the Bulimia subscale of the EDI-2, suggesting adequate construct validity.

Demographics. A brief demographics questionnaire was designed to obtain information about background and health information. The background information section focused on participant’s age, race/ethnicity, grade point average, and year in school. The health information section covered participant’s height, weight, ideal weight, length of time at current weight, satisfaction with current weight, highest and lowest weight in the past two years, eating disorder history (e.g., “Have you ever been diagnosed or treated for an eating disorder? If yes, when?”), and menstrual history (e.g., “How many menstrual cycles have you had in the past 12 months?”).

Procedure

Approval was obtained from the University of North Texas Institutional Review Board for Human Subjects Research prior to the onset of data collection (see Appendix C). Participants were solicited from undergraduate psychology classes using the Psychology Department’s Sona research system to participate in a study on the physical and psychological health of female undergraduates. Consent and the questionnaires were done online through a secure website. Participants completed the demographic questionnaire and the following measures, which were counterbalanced to control for ordering effects: MCSDS, CTQ, SAHQ, PSPS, ISOS, SATAQ-3,
BAAR, OBCS, BSS, EDI-2, BULIT-R, and EAT-26. The questionnaires took approximately 40 minutes to complete. Following completion, participants received class credit for their participation consistent with the department of psychology’s policies. In addition, participants were entered in a drawing to win one of six $50 cash prizes as an incentive for their motivation to participate in the study.
RESULTS

Due to the fact that data were collected online, missing data were not an issue. Total scores of the measures were computed and the means, standard deviations, and measures of distributional properties (e.g., skewness, kurtosis) were determined. Skewness and kurtosis were within acceptable ranges, with the exception of the BULIT-R, the EAT-26, the SAHQ, and the CTQ, which were skewed positively. These variables were logarithmically transformed.

For constructs where only one measured variable was included (i.e., sexual objectification, self-objectification, internal bodily awareness), the items from each scale were parceled to create two indicators (Russell, Kahn, Spoth, & Altmaier, 1998). Using exploratory factor analysis for each measure, a single factor was extracted, which is consistent with each scale’s established factor structure. Items from each measured variable were rank-ordered according to the magnitude of the factor loadings. Items then were assigned, from the highest to the lowest factor loading, to the two parcels to create equalized average loadings of each parcel on the latent factor. Total scores for each parcel were represented by the average of the items on that parcel. Internal consistency reliabilities, means, standard deviations, and correlations among all the total scores are presented in Table 1.

Seventy-one participants were removed from the sample because they provided inaccurate demographic information (e.g., entered their name in a space designated for their age), were 25 years of age or older, scored a 3 on the CTQ-Validity scale, or endorsed not applicable for all OBCS items (and thus a total score could not be determined). Because the purpose of the study was to test Moradi and Huang’s (2008) model and then confirm it in a second, independent sample, the 626 qualified participants were matched on age and BMI and then divided into two equivalent samples: Sample A (n = 313; exploratory sample) and Sample B (n = 313;
confirmatory sample). In previous research, BMI and age have been related to the variables tested in the models and were chosen as the matching parameters to create equivalent samples (Augustus-Horvath & Tylka, 2009; Tiggemann & Lynch, 2001). To ensure that the samples were similar, they were compared on each latent variable’s set of measured variables. For all sets of measured variables (e.g., BULIT-R-par1 and BULIT-R-par2), the MANOVAs revealed no significant differences between the two groups on the mean scores of the measured variables ($p$’s > .05, See Table 2).

The proposed models were tested using structural equation modeling (SEM), which is a multivariate statistical method of relating observed measures to proposed theoretical constructs using a theoretically derived model (Bentler, 1980). In this study, two steps were followed. First, confirmatory factor analysis (CFA) was used to establish the measurement model, which is the relationship of the measured variables to the hypothesized constructs. Variables that did not load significantly ($t$-value < 1.96) or that had high standardized residuals were dropped from the model. Second, once the measurement model was confirmed, the structural model was tested to determine the strength and significance of the proposed pathways among the latent constructs. Because the data in both sample A and B demonstrated adequate univariate and multivariate normality, the maximum likelihood procedure was used in EQS (Weston & Gore, 2006). Although some of the variables had significant correlations with the SDS, none of the correlations exceeded .31 (or 9.67% of the variance) so there were limited problems regarding the participants presenting themselves in a favorable light in how they responded to the other questionnaires.
Measurement Model - Sample A

Sexual Abuse was added first to the model and was represented by the SAHQ-Adolescent/Adult and Child and the CTQ. Due to poor fit, SAHQ-Adolescent/Adult was dropped. The error variance for the CTQ had to be set using Bollen’s (1989) method, but after that, both variables loaded positively on the sexual abuse construct, indicating that higher scores on this latent variable represented high levels of sexual abuse. Next, Societal Pressures Regarding Weight and Body Size was added to the model and was represented by the four types of pressures (e.g., lose weight) from the PSPS. All four pressures loaded positively, indicating that the construct represented the experience of general societal pressures regarding weight, body, and appearance.

Sexually Objectifying Experiences was the next construct added to the model, and was represented by the two parceled measures from the ISOS. After setting the error variance for Parcel 1 using Bollen’s (1989) method, both parcels loaded positively on the sexual objectification construct, indicating that higher scores on this latent variable represented higher levels of sexual objectification.

Internalization of Cultural Standards of Beauty was added next and was represented by the two factors from the BAAR, Physically Fit and Attractive/Thin and the SATAQ-3. Due to poor fit, the SATAQ-3 was dropped. The two factors of the BAAR loaded positively on the construct and represented internalization of cultural standards of beauty. Next, Self-Objectification was added to the model and was represented by the two parceled measures from the Body Surveillance factor of the OBCS. Both parcels loaded positively on the self-objectification construct, and thus this latent variable represented higher levels of the construct.
Body Shame was the next construct added to the model, and was represented by the BSS and the OBCS Body Shame factor. The two variables loaded positively on the Body Shame construct, indicating that higher scores on this latent variable represented higher levels of body shame. Internal Bodily Awareness was added next to the model and was represented by the two parceled measures from the EDI-2. Both parcels loaded positively on the Internal Bodily Awareness factor, indicating that higher scores on this latent variable represented lower levels of internal bodily awareness.

Bulimic Symptomatology was the last construct added to the model and was initially represented by the EAT-26 and the BULIT-R. Due to poor fit, the EAT-26 was dropped from the model. The BULIT-R was then parceled to create two indicators. After setting the error variance for Parcel 1 using Bollen’s (1989) method, both parcels loaded positively on the construct, indicating that the construct represented higher levels of bulimic symptomatology. See Figure 2 for the final measurement model and table 3 for the factor loadings and errors associated with each measured variable that was retained in the measurement model. The overall fit of the final measurement model was good (see Table 4).

Structural Model- Sample A

In Model A it was hypothesized that: (a) Sexual Abuse would be positively related to Sexually Objectifying Experiences and Self-Objectification, (b) Societal Pressures Regarding Weight and Body Size would be positively related to Sexually Objectifying Experiences and Internalization of Cultural Standards of Beauty, (c) Sexually Objectifying Experiences would be positively related to Self-Objectification and Internalization of Cultural Standards of Beauty, (d) Internalization of Cultural Standards of Beauty would be positively related to Self-Objectification and Body Shame, (e) Self-Objectification would be positively related to Internal
Bodily Awareness and Body Shame, and (f) Body Shame and Internal Bodily Awareness would
be positively related to Bulimic Symptomatology. The overall fit of the initial model was good
(see Table 4), although the pathway between Sexually Objectifying Experiences and
Internalization of Cultural Standards of Beauty was non-significant and the pathway between
Sexual Abuse and Self-objectification was negative. All of the other pathways in the model were
significant and in the expected direction.

Model B was then tested. This model was the same as Model A, but contained an
additional pathway between Body Shame and Internal Bodily Awareness that was supported by
past research (i.e., Augustus-Horvath & Tylka, 2009; Kozee & Tylka, 2006; Tylka & Hill, 2004).
The overall fit of Model B also was good, and reflected a significant improvement in model fit
over Model A, $\Delta \chi^2 (1, N = 626) = 40.980, p < .001, \Delta AIC = 38.980$. The pathway between
Sexual Abuse and Self-objectification again was negative. In addition, the pathways between
Sexually Objectifying Experiences and Internalization of Cultural Standards of Beauty and
between Self-objectification and Internal Bodily Awareness were non-significant. All of the
other pathways were significant and in the expected direction (see Figure 3).

Direct and indirect effects were examined within the better fitting Model B. Sexual
Objectification was determined directly by Sexual Abuse (standardized parameter estimate, $\beta =
.153$) and greater Societal Pressures Regarding Weight and Body ($\beta = .158$), which accounted for
5% of this factor’s variance. Internalization of Cultural Standards of Beauty was best explained
by greater Societal Pressures Regarding Weight and Body Size ($\beta = .796$) which accounted for
65% of this factor’s variance; the direct effects of Sexually Objectifying Experiences on
Internalization ($\beta = .037$) and the indirect effect of Sexual Abuse ($\beta = .006, p > .05$) were not
significant. Sexually Objectifying Experiences ($\beta = .129$), stronger Internalization of societal
values about beauty, appearance, and body (β = .537), and lower levels of Sexual Abuse (β = -.159) were directly related to greater Self-objectification. Societal Pressures Regarding Weight and Body (β = .451) was indirectly related to greater Self-Objectification. The direct and indirect effects accounted for 35% of the variance in Self-Objectification. In turn, higher levels of Self-Objectification (β = .196) and Internalization (β = .759) directly led to greater Body Shame, whereas Societal Pressures Regarding Weight and Body (β = .697) were related indirectly to Body Shame. These variables accounted for 78% of the Body Shame variance. The indirect effect of Sexual Abuse on Body Shame (β = -.022) was not significant. Internal Bodily Awareness was best described by the direct effect of Body Shame (β = .553) and the indirect effects of Societal Pressures Regarding Weight and Body (β = .384), Self-objectification (β = .105), and Internalization (β = .476), which accounted for 30% of the Internal Bodily Awareness variance. Self-Objectification’s direct effects on Internal Bodily Awareness (β = -.003) were not significant as were the indirect effects of Sexual Abuse (β = -.012) and Sexually Objectifying Experiences (β = .031). Finally, difficulties recognizing and responding to emotional and bodily cues (Internal Bodily Awareness; β = .141) and greater Body Shame (β = .771) were directly associated with more Bulimic Symptomatology, whereas Greater Societal Pressures Regarding Weight and Body (β = .592), Self-Objectification (β = .166), and Internalization (β = .733) were indirectly associated with more Bulimic Symptomatology. These variables accounted for 73% of the Bulimic Symptomatology variance. The indirect effects of Sexual Abuse (β = -.019) and Sexually Objectifying Experiences (β = .049) on Bulimic Symptomatology were not significant.

Measurement Model- Sample B

The final measurement model from Sample A was tested in Sample B. In addition to the error variances that were set in Sample A, error variances were set for the EDI-2 Interoceptive
Awareness parcel 1, the OBCS Body Surveillance parcel 1, and OBCS Body Shame using Bollen’s (1989) method. After setting these error variances, all the same measured variables loaded similarly in Sample B and the overall fit of the model was good. See Table 3 for factor loadings and errors associated with each measured variable and Table 4 for the model fit indices.

**Structural Model- Sample B**

As the better fitting model in Sample A, the Model B was tested with the Sample B data. Model B fit the data well (see Table 4). Similar to what was found in Sample A, the pathways between Sexually Objectifying Experiences and Internalization of Cultural Standards of Beauty and between Self-Objectification and Internal Bodily Awareness were not significant. The pathways between Sexual Abuse and Self-Objectification, between Societal Pressures Regarding Weight and Body Size and Sexually Objectifying Experiences, and between Sexually Objectifying Experiences and Self-objectification were also non-significant. All of the other pathways were significant and in the expected direction (see Figure 3).

Higher levels of Sexual Abuse ($\beta = .142$), but not Societal Pressures Regarding Weight and Body Size ($\beta = .104$), were related directly to Sexually Objectifying Experiences and accounted for just 3\% of its variance. Societal Pressures Regarding Weight and Body Size ($\beta = .607$), but not Sexually Objectifying Experiences ($\beta = .038$), was related directly to Internalization; the indirect effects of Sexual Abuse ($\beta = .005$) also was not significant. These variables accounted for 38\% of the variance in Internalization. Internalization ($\beta = .500$) was directly, and Societal Pressures Regarding Weight and Body Size ($\beta = .312$) indirectly, related to Self-Objectification; the direct effects of Sexually Objectifying Experiences ($\beta = .055$) and Sexual Abuse ($\beta = -.084$) were not significantly related to Self-objectification. These variables explained 26\% of the Self-Objectification variance.

Internalization ($\beta = .613$) and Self-
objectification ($\beta = .219$) were directly, and Societal Pressures Regarding Weight and Body Size ($\beta = .443$) indirectly, related to Body Shame; the indirect effects of Sexual Abuse ($\beta = -.013$) and Sexually Objectifying Experiences ($\beta = .039$) were not significant. Collectively, these variables accounted for 56% of the Body Shame variance. Body Shame ($\beta = .594$), but not Self-objectification ($\beta = .090$) was related directly to Internal Bodily Awareness. Internalization ($\beta = .474$), Self-objectification ($\beta = .130$), and Societal Pressures Regarding Weight and Body Size ($\beta = .291$) were related indirectly to Internal Bodily Awareness; the indirect effects of Sexually Objectifying Experiences ($\beta = .030, p > .05$) and Sexual Abuse ($\beta = -.014, p > .05$) were not significantly related to Internal Bodily Awareness. These variables accounted for 42% of the Internal Bodily Awareness variance. Finally, greater difficulties identifying and responding to physical and emotional cues ($\beta = .185$) and greater Body Shame ($\beta = .674$) were directly, and Internalization ($\beta = .575$), Self-objectification ($\beta = .188$), and Societal Pressures Regarding Weight and Body Size ($\beta = .353$) were indirectly related to increased Bulimic Symptomatology; the indirect effects of Sexual Abuse ($\beta = -.011, p > .05$) and Sexual Objectification ($\beta = .032, p > .05$) were not significant. These variables accounted for 65% of the variance in Bulimic Symptomatology.
DISCUSSION

The current study tested components of Moradi and Huang’s (2008) proposed model of objectification theory, and extended it by including other dimensions of the socialization experience (i.e., societal pressures regarding weight and body size, a history of sexual abuse) that were recommended by Moradi (2010) and have been related to the development of disordered eating (Rodgers & Chabrol, 2009; Stice, 1998; Treuer, Koperdák, Rózsa, & Füredi, 2005). Both models proposed for this study were acceptable, though Model B had a significantly better fit with the data. As a result, Model B was tested in the confirmatory sample. Across the two samples, 65% to 73% of the variance in Bulimic Symptomatology was explained by the direct effects of Internal Bodily Awareness and Body Shame and by the indirect effects of Internalization, Self-objectification, and Societal Pressures. These variables were related to Bulimic Symptomatology as expected, providing support for certain pathways within the Moradi and Huang (2008) model and validation of components of objectification theory (Augustus-Horvath & Tylka, 2009; Calogero et al., 2005; Moradi et al., 2005; Sinclair, 2006; Tylka & Hill, 2004). Although theory and previous research has supported Sexual Abuse and Sexually Objectifying Experiences within the objectification model, these socialization experiences were not consistently, strongly, nor significantly related to Bulimic Symptomatology as were the other variables examined. In terms of socializing experiences, Sexually Objectifying Experiences and Sexual Abuse do not appear to be nearly as salient as the experience of Societal Pressures Regarding Weight and Body Size in understanding women’s experience of bulimic symptomatology. The lack of consistently significant relationships with these specific socialization experiences was contrary to what was predicted by theory and brings into question,
empirically, their usefulness in understanding the development of disordered eating behaviors as outlined in objectification theory (Fredrickson & Roberts, 1997; Fredrickson et al., 1998).

As hypothesized, a higher level of Sexual Abuse was associated with more Sexually Objectifying Experiences in both samples. Undergraduate women who experienced some type of sexual abuse in childhood reported being viewed or treated as an object that exists for the pleasure and use of others, which is consistent with objectification theory (Fredrickson & Roberts, 1997; Fredrickson et al., 1998). Because women who were abused as children are more likely to be sexually assaulted as adults, in comparison to women who were not, these women may experience an ongoing cycle of sexual violence and objectification (Briere & Runtz, 1987; Campbell, Greeson, Bybee, & Raja, 2008; Jun, Rich-Edwards, Boynton-Jarrett, & Wright, 2008).

Women who are sexually abused as children also may experience greater psychological vulnerability and difficulties (e.g., depression, post-traumatic stress disorder, abuse substances, experience feelings of powerlessness and low self-worth) than women who do not have a history of sexual abuse (Brener et al., 1999; Kaltman et al., 2005). Due to this vulnerability, these women may engage in risky behaviors (e.g., using drugs or alcohol to cope with feelings of distress) or place themselves in dangerous environments (e.g., being impaired at social functions) where they may become targets for sexual predators (Brener et al., 1999). Because this study is the first to empirically connect childhood sexual trauma to later sexual objectification, researchers will need to validate this relationship in other independent samples of women and test the potential mechanisms that underlie it.

The relationship between Societal Pressures and Sexually Objectifying Experiences was significant in one, but not both, samples and the strength of that finding was weak. Specifically, higher levels of social pressures from family, friends, partners, and the media to lose weight,
exercise, be more attractive, and to have a thin body were associated weakly with more sexually objectifying experiences. Although Moradi (2010) noted that societal pressures may be thought of as a specific manifestation of sexual objectification experiences, when measured as they were in the current study, pressures actually may be a unique type of socialization that has its own effects on internalization and, ultimately, bulimic symptomatology. To the extent that messages from family, friends, and the media focus on body, weight, dieting, and appearance, there likely is only a small relationship with sexual objectification, as traditionally measured. Although these pressures may communicate to girls and women that their bodies are modifiable and there is a societal standard to be met, such pressures may not make them believe that their value is determined primarily by their sexuality or sexual attractiveness. Because the idea of pressures being part of the sexual socialization experience is new (Moradi, 2010), additional research is needed to determine the extent to which these two constructs are related or are unique and how they contribute, ultimately, to women’s mental health and well-being. At least from the current study’s results, it appears that they are more different than similar and make their own specific contributions to understanding disordered eating among female undergraduates.

Although the direct relationships between Sexual Abuse and Sexually Objectifying Experiences was significant for both samples and between Societal Pressures and Sexually Objectifying Experiences in one sample, these constructs only accounted for 3% to 5% of the variance in reported Sexual Objectification. Thus, Sexually Objectifying Experiences, as measured in the current study, are best explained by other types of variables or socialization experiences, such as the amount of time individuals spend in environments that often objectify girls or women (e.g., co-ed schools, working in environments that require provocative uniforms, sororities), individuals’ exposure to objectifying media (e.g., magazines, movies) (Aubrey,
the experience of childhood harassment for gender nonconformity (Wiseman & Moradi, 2010), and harassment resulting from early pubertal maturation (Lindberg et al., 2007). Based on the current study’s findings, additional research is needed to better understand the variables that contribute to the presence and maintenance of feelings of sexual objectification.

Societal Pressures Regarding Weight and Body Size, but not Sexually Objectifying Experiences, was related directly and significantly to Internalization of Cultural Standards of Beauty and accounted for 38% to 65% of its variance. The more women are exposed to societal pressures concerning weight, dieting, and appearance, the more likely they are to integrate these pressures into their belief systems and make them central in their self-evaluation (Anderson, 2009; Myers & Crowther, 2007; Stice, 2002; Tylka & Subich, 2004). For example, among samples of undergraduate women high levels of awareness of media pressures to meet the thin-ideal and a high degree of family influence to be thin were related to high levels of internalization (Myers & Crowther, 2007). Tylka and Subich (2004) also reported that, among female college students, sociocultural pressures accounted for 48% of the variance in their measure of internalization. As women are exposed to such pressures, are taught that their appearance has social value and gives them status, and are reminded that their appearance is central to whether or not (and the degree to which) they will be accepted by others (Brumberg, 1997; Calogero et al., 2005; Rodgers & Chabrol, 2009; Stice, 2002), over time and repeated exposure, they adopt, or internalize, these beliefs as their own (Nolen-Hoeksema & Girgus, 1994; Tolman & Debold, 1994). Although this socialization process has value in that women learn about what is expected in their cultural milieu, it can be problematic when these beliefs become so ingrained and rigid that their identity and personal values are limited by them.
Inconsistent with past research and theory (Moradi & Huang, 2008; Moradi et al., 2005; Morry & Staska, 2001), Sexually Objectifying Experiences was not significantly related to Internalization. Because women are aware that others view their bodies as objects to be critiqued and that appearance can directly influence their social mobility, economic attainment, and power, it was hypothesized that their internalization of beliefs about sociocultural standards of beauty would be reinforced by sexually objectifying experiences (Fredrickson & Roberts, 1997). However, this hypothesis was not supported in either sample. One reason for the discrepancy between the findings in the current study and past research may be how the constructs were measured and what the constructs really represented. For example, Morry and Staska (2001), who reported finding a relatively strong relationship between sexual objectification and internalization, used the Magazine Exposure Scale in their study to represent sexual objectification. As described by Morry and Staska, this questionnaire examined participants’ exposure to ideal body images that were presented through fitness and beauty magazines, which appears to be more a measure of social/media pressures regarding appearance than a true measure of sexual objectification. It did not, for instance, account for other objectifying experiences (e.g., hearing comments made about one’s appearance, experiencing objectifying gazes in social encounters) that are part of the sexualization experience, and Morry and Staska (2001) did not provide any data concerning the validity of the scale as a measure of sexual objectification. Thus, the Magazine Exposure Scale appears to be more a measure of media pressure than objectification, which would be expected to be related to higher levels of internalization as was found in the current study.

However, when sexual objectification is measured in a manner consistent with objectification theory, the relationship between it and internalization is likely to be weak at best.
For example, Moradi et al. (2005) used the sexual objectification subscale from Swim, Cohen and Hyer’s (1998) 25-item measure of daily sexist events to assess sexually objectifying experiences. This subscale assesses the frequency of sexist experiences (e.g., “Had people shout sexist comments, whistle, or make cat-calls at me,” “Had sexist comments made about parts of my body or clothing”) that are similar to those measured in the ISOS, which was used in the current study. Even though Moradi et al. (2005) found a significant relationship between sexual objectification and internalization, the path coefficient between these two variables was just .25 and objectification accounted for only 6% of the internalization variance. Thus, the fact that Moradi et al. (2005) reported significant findings and this study did not may simply be due to the fact that, the relationship (particularly when objectification is measured through sexual experiences) is small and there will be some natural variation in significance from sample to sample.

As hypothesized, there was a significant direct relationship between Internalization and Self-Objectification, which is consistent with past research (Calogero et al., 2005; Moradi et al., 2005; Moradi & Huang, 2008; Moradi & Rottenstein, 2007; Morry & Staska, 2001; Sinclair, 2006). For example, in their study of undergraduate women, Moradi et al. (2005) reported that the standardized coefficient between internalization and self-objectification, represented by body surveillance, was .50. This, and the current study’s, finding suggests that the more participants integrated sociocultural ideals of attractiveness into their belief system, the more likely they were to use their beliefs to guide their behaviors, emotions, and view and monitor their bodies as a separate objects (Sinclair, 2006; Thompson & Stice, 2001; Thompson et al., 2004). Thus, women who have internalized the societal ideal of beauty essentially have a self-schema that is defined by how they look and engage in body monitoring to ensure that their appearance remains
close to the ideal, in hopes that they will be accepted and valued by others (Fredrickson & Roberts, 1997).

Contrary to what was expected, Sexually Objectifying Experiences was significantly related to Self-Objectification in only one sample. Theoretically, sexually objectifying experiences may lead to self-objectification because as women become aware that their bodies are being evaluated by others and internalize objectifying images into their self-perception, they may begin to view themselves as objects. Due to viewing themselves as objects and the increased hypervigilance associated with the prospect that their bodies will likely be evaluated and critiqued by others, some women may engage in self-objectification to determine how others will perceive and treat them. Although the relationship between these two constructs is a central part of objectification theory (Harper & Tiggemann, 1998; Moradi & Huang, 2008; Morry & Staska, 2001; Sinclair, 2006), the findings of the current study do not strongly support the relationship.

There are two potential explanations for why the discrepancy between what was predicted based on objectification theory and what was determined empirically in the current study. First, the inconsistent and the weak relationship between the two constructs may have resulted from how sexual objectification was measured. As noted above, previous research (Harper & Tiggemann, 1998; Morry & Staska, 2001) has shown a more consistent relationship between these two constructs when sexual objectification was measured using the Magazine Exposure Scale or participants were exposed to magazine advertisements that endorsed the thin-ideal. Again, the Magazine Exposure Scale (Morry & Staska, 2001) appears to measure how social pressures regarding beauty are presented through the media, not sexual objectification. In addition, the current study relied on participants’ self-reports about previous sexually
objectifying experiences and did not experimentally manipulate sexual objectification to determine how those experiences may influence self-objectification. It may be that the immediate experience of objectification, such as through experimental manipulations, is particularly influential and may increase the likelihood that women may engage in self-objectification (Moradi & Huang, 2008). But when sexual objectification is measured through self-report, it’s salience to objectification is diminished.

A second explanation is that even when a more direct self-report measure of sexual objectification is used, it may be that the relationship between sexual and self-objectification is weak and self-objectification is best explained by other socialization experiences and factors, such as the extent to which they have been exposed to social pressures about body and appearance and their internalization of these ideals. For example, Augustus-Horvath and Tylka (2009) found that although the sexual and self-objectification relationship was significant, the standardized coefficients ranged from .21 to .27 and sexually objectifying experiences only accounted for 6.7% of the variance in self-objectification. Moradi et al. (2005), on the other hand, reported a standardized coefficient of .14 for sexually objectifying experiences and a standardized coefficient of .50 for internalization in their prediction of self-objectification (as represented by body surveillance). When combined, sexually objectifying experiences and internalization accounted for 34% of the variance in self-objectification, though internalization explained the larger portion of self-objectification (Moradi et al., 2005). In the current study, parameter estimates between Sexually Objectifying Experiences and Self-objectification ranged from .06 to .13, which is consistent with Moradi et al. (2005). Furthermore, in the two models in the current study, Internalization accounted for the larger portion of the 26% to 35% of the variance explained in Self-Objectification. Thus, based on the current study’s findings and
recent research (Augustus-Horvath & Tylka, 2009; Harper & Tiggemann, 1998; Moradi & Huang, 2008; Moradi et al., 2005; Morry & Staska, 2001; Sinclair, 2006), it appears that the relationship between Sexually Objectifying Experiences and Self-Objectification is weak, may vary across samples, and may not be significant when multiple variables, in particular internalization, are modeled on Self-Objectification.

The relationship between Sexual Abuse and Self-objectification was supported in one, but not the other, sample, and the relationship was negative and weak. According to objectification theory, one way girls and women are sexually objectified is through abusive sexual experiences and when women are sexually abused their bodies are viewed and treated as sexual objects by perpetrators (Fredrickson & Roberts, 1997; Fredrickson & Roberts, 2002). Although unexpected based on objectification theory (Fredrickson & Roberts, 1997), this finding is consistent with Hill and Fischer (2008) who found that experiences of being sexually assaulted were not related significantly to self-objectification. They further noted that it may be other sexually-related socialization experiences (i.e., sexual gaze, sexual harassment) that contribute to women developing a tendency to self-objectify.

Because sexual abuse unfortunately is prevalent among women (Amstadter & Vernon, 2008; Brener et al., 1999; Follette et al., 1996; Tripp & Petrie, 2001; Vogeltanz et al., 1999), its potential influence on self-objectification should not be completely discounted. Instead, more research is needed to better understand the manner in which past sexual abuse may contribute to women focusing on their bodies and viewing themselves as objects as well as to their overall psychological well-being, including disordered eating. It may be that the effects associated with sexual abuse occur through a heightened, negative focus on one’s body and physical appearance (Kearney-Cooke & Striege-Moore, 1994), which may lead women to cope with this by bingeing
and purging. For example, the binge and purge cycle may provide stress or tension relief from painful emotions and may result in reduced awareness of intolerable thoughts and emotions related to sexual abuse (Everill & Waller, 1995). Thus, future research could explore how sexual abuse may lead to increased negative affect and troublesome cognitions, and how those thoughts and emotions could indirectly lead to bulimic symptomatology through increases in bingeing and/or purging. In particular, it would be beneficial to explore why women who were sexually abused report that abuse is not similar to other socialization experiences, such as experiences of sexual objectification, and why previous abusive experiences do not lead them to internalize sexually objectifying experiences and consistently engage in self-objectification.

Internalization of Cultural Standards of Beauty and Self-objectification were directly, and Societal Pressures Regarding Weight and Body Size indirectly (through its effects on Internalization), related to Body Shame. Across the two samples, 56% to 78% of the variance in Body Shame was accounted for by these constructs, which is consistent with past research (Augustus-Horvath & Tylka, 2009; Calogero, 2004; Greenleaf & McGreer, 2006; Kozee & Tylka, 2006; Mercurio & Landry, 2008; Miner-Rubino et al., 2002; Moradi et al., 2005; Muehlenkamp & Saris-Baglama, 2002; Noll & Fredrickson, 1998; Tylka & Hill, 2004). For example, Augustus-Horvath and Tylka (2009) reported that self-objectification, as represented through body surveillance, accounted for 53% of the variance in body shame in a sample of female undergraduates. Self-objectification also has been significantly related to body shame in samples of deaf women (Moradi & Rottenstein, 2007), women who were pursuing in-patient treatment for disordered eating (Calogero et al., 2005), lesbians (Kozee & Tylka, 2006), dancers (Tiggemann & Slater, 2001), women over the age of 25 (Augustus-Horvath & Tylka, 2009), and adolescents (Grabe et al., 2007; Slater & Tiggemann, 2002). Regarding the effects of
internalization on body shame, Moradi et al. (2005) also reported a significant relationship among female undergraduates. Women who have adopted the current cultural standards of beauty as their own may experience body shame because they believe they do not meet society’s current beauty standards and that others are aware of their perceived physical inadequacy (Fredrickson & Roberts, 1997; Moradi et al., 2005). Taken together, these findings suggest that women, inclusive of different subgroups, who view their bodies as objects to be critiqued and who have introjected a belief system about beauty based on society’s unrealistic standards experience increased levels of shame about their bodies (Fredrickson & Roberts, 1997).

The experience of body shame was related directly to a greater likelihood that the women would ignore or suppress their internal body cues in hopes of restricting their caloric intake. Societal Pressures, Internalization, and Self-Objectification all had indirect effects, suggesting that their influence was mediated by the extent to which women experience body shame. Previous research has demonstrated strong relationships between high levels of body shame and low internal bodily awareness among samples of heterosexual and lesbian undergraduate women and women over the age of 25 (Augustus-Horvath & Tylka, 2009; Kozee & Tylka, 2006; Tylka & Hill, 2004). For example, Tylka and Hill (2004) found that body shame accounted for 53% of the internal bodily awareness variance in a sample of undergraduate women. Because body shame is likely to motivate women to change aspects of themselves that do not meet current cultural standards, women may be motivated to ignore their internal bodily cues of hunger and satiety because they believe these cues interfere with their attempts to lose weight and to more closely approximate the thin-ideal (Augustus-Horvath & Tylka, 2009; Noll & Fredrickson, 1998). According to this study and previous research, women who are internally unaware will be at increased risk for the development of disordered eating behaviors.
As hypothesized, low levels of Internal Bodily Awareness and high levels of Body Shame were related significantly to more reported Bulimic Symptomatology, accounting for 65% to 73% of its variance. In studies that have used both constructs to predict disordered eating symptomatology, body shame and poor internal bodily have accounted for 61% to 62% of the variance among samples of female undergraduates (Augustus-Horvath & Tylka, 2009; Tylka & Hill, 2004). Collectively, these findings suggest that the combination of being ashamed of one’s body, having trouble identifying and expressing one’s emotions, and being unable to recognize when one is hungry and full may lead women to eat in unhealthy ways and/or to binge to cope with their feelings of shame. Women who fall into this pattern of eating may eventually turn to pathogenic weight control behaviors, such as vomiting and excessive exercising, to cope with the disgust they feel toward themselves.

This study empirically tested the major components of the model proposed by Moradi and Huang (2008) and extended it by including additional socialization experiences (i.e., Sexual Abuse, Societal Pressures Regarding Weight and Body Size) that were recommended by Moradi (2010). Based on current research (Augustus-Horvath & Tylka, 2009; Kozee & Tylka, 2006; Tylka & Hill, 2004) a pathway between Body Shame and Internal Bodily Awareness was added. Although some pathways of Moradi and Huang’s (2008) model were strongly supported, others were not, suggesting that certain socialization experiences may be more important than others in understanding women’s reporting of bulimic symptomatology. The significant pathways from Internalization to Self-objectification and Body Shame, from Self-objectification to Body Shame, from Body Shame to Internal Bodily Awareness, and from Internal Body Awareness and Body Shame to Bulimic Symptomatology were expected and consistent with previous research. The non-significant pathway between Sexually Objectifying Experiences and Internalization and
inconsistent relationship between Sexually Objectifying Experiences and Self-objectification were unexpected and were not consistent with Moradi and Huang’s (2008) proposed model.

Adding Societal Pressures Regarding Weight and Body Size to the model helped explain the presence of several other constructs, such as Internalization, Self-objectification, Body Shame, Internal Bodily Awareness, and Bulimic Symptomatology. Consistent with Moradi (2010) researchers should consider adding Societal Pressures to Moradi and Huang’s (2008) model, though specify the effects of these socialization experiences primarily through Internalization and not Sexual Objectification. In addition, based on the findings from the current study and other research (i.e., Augustus-Horvath & Tylka, 2009; Kozee & Tylka, 2006; Tylka & Hill, 2004), a pathway between Body Shame and Internal Bodily Awareness should be included. Although a history of sexual abuse was significantly, though weakly, related to more sexually objectifying experiences, as mentioned previously, the relationship between Sexually Objectifying Experiences and other constructs (i.e., Internalization, Self-objectification) was weak and inconsistent. Thus, researchers examining the model proposed by Moradi and Huang (2008) should focus more on the potential influences of societal pressures than sexual abuse or other sexually objectifying experiences (see Figure 4).

Implications for Interventions

Disordered eating behaviors often develop during adolescence and early adulthood and prevalence rates for subclinical disordered eating among college women range from 15% to 62% (Graber, Tyrka, & Brooks-Gunn, 2003; Hoek & van Hoeken, 2003; Kirk, Singh, & Getz, 2001). Although many variables have been suggested to contribute to the development of disordered eating (Ackard, Croll & Kearney-Cooke, 2002; Austin & Smith, 2008; Bradford & Petrie, 2008; Stice, 2002; Stice, Shaw & Nemeroff, 1998), the current study consistently found that Societal
Pressures Regarding Weight and Body Size, Internalization of Cultural Standards of Beauty and Self-Objectification indirectly effect the development of Bulimic Symptomatology whereas high levels of Body Shame and low Internal Bodily Awareness are related directly to Bulimic Symptomatology. The findings from the current study underscore the fact that the etiology of bulimic symptomatology is complex and multidimensional. Through greater understanding of the complexity of these relationships, individuals studying objectification theory and developing interventions to reduce bulimic symptomatology may focus on how these relationships work together to result in heightened risk.

If individuals are engaging in disordered eating behaviors, it may be beneficial for clinicians to specifically address some of the relationships supported in the current study. Clinicians could help women challenge and reject pressures to adhere to social standards of beauty, alter internalized standards of beauty, explore the process of self-objectification and feelings of body shame, and encourage reconnection to bodily sensations and honoring physical signals of hunger and satiety (Szymanski, Carr, & Moffitt, 2011). These interventions may occur in a variety of ways.

For example, Scott and Derry (2005) suggested that a combination of psychoeducation and experiential learning exercises (e.g., rock climbing, martial arts, strength training) may help women understand how objectification interferes with activities and behaviors that are physically and mentally beneficial. These activities may persuade women to value their bodies for their function and not solely for their appearance by encouraging them to participate in sport activities that are empowering and typically are not associated with objectification. In addition, Moradi and Huang (2008) suggested that activities that encourage women to focus on how their body feels and functions, rather than focusing on how it looks could lead to them to engage in self-
objectification less frequently and increase their bodily awareness as well as a reduce feelings of body shame and disordered eating behaviors. By exploring and challenging societal pressures that women experience on a daily basis on an individual and more public level, some women may feel empowered and more stable in their sense of who they are as women and thus could resist internalizing societal standards of beauty and developing schemas that emphasize the importance of appearance (Peterson, Grippo, & Tantleff-Dunn, 2008; Szymanski et al., 2011). For example, women could identify messages they receive about how they should look and act because they are women, identify the source and reinforcers of these messages, explore the possible benefits and disadvantages of conforming to the messages, and could decide if they would like to reconstruct the messages into ones that are more self-enhancing and less restrictive (Szymanski et al., 2011). Through activities such as these, internalization may be reduced and could influence the likelihood that they would self-objectify, experience high levels of body shame, lower internal awareness, and ultimately engage in disordered eating behaviors.

Stice and Shaw (2004) reported in their meta-analysis of eating disorder prevention programs that cognitively challenging internalization of the thin-ideal and behaviorally challenging fasting and overeating behaviors, that could be related to low levels of internal bodily awareness, resulted in the most promising effects in comparison to other programs that focused on other factors (i.e., increasing self-esteem, promoting stress management skills). Undoubtedly, more research is needed to better understand the most effective prevention and intervention programs for individuals struggling with disordered eating behaviors. Through greater knowledge of objectification theory, clinicians can precisely tailor prevention programs and interventions to directly address these difficulties that lead to lower psychological functioning.
Limitations and Implications for Future Research

There were several limitations in the current study that warrant discussion. First, all data were self-report and 106 women did not complete the study. It is possible that some of the women quit the study due to discomfort, may have underreported some sensitive information (e.g., history of sexual abuse, engaging in disordered eating behaviors), or may have responded to items dishonestly. Although underreporting and dishonesty are concerns for self-report data, participants completed the surveys anonymously online and correlations were relatively low between the instruments and the MCSDS, a measure of social desirability. In addition, the relationships that were significant were in the expected directions, suggesting that there was some consistency in how the women reported on the measures (and in a way that was similar to what was found in other studies).

Second, the samples consisted of women between the ages of 18 and 24 who were currently enrolled in undergraduate psychology courses at two universities, so generalizability is limited to similar groups of women. Consistent with other research (e.g., Augustus-Horvath & Tylka, 2009) the current study was open to women who were of traditional undergraduate age. Future research should test the current study’s model with samples comprised of women from specific groups, such as race/ethnicity, sexual orientation, and age, and should explore objectification theory among male samples. Although men, women of all ages, and diverse individuals are exposed to the cultural ideals of beauty, men and diverse individuals may find it easier or more difficult to challenge these beliefs due to their identity, previous experiences, and unique pressures within their environments.

When objectification theory has been tested among diverse samples, the theory has been supported but the strength and inclusion of specific pathways within the model have varied. For
example, Augustus-Horvath and Tylka (2009) found that women who were 25 years or older reported a stronger relationship between body shame and disordered eating and a weaker relationship between internal awareness and disordered eating in comparison to women between the ages of 18 and 24. Among a sample of lesbian women, Kozee and Tylka (2006) found that sexually objectifying experiences led directly to low internal awareness and self-objectification led directly to disordered eating. These pathways were not supported among a sample of heterosexual undergraduate women. Likely as a result from deviating from the slender Caucasian ideal, minority women report experiencing greater body dissatisfaction after self-objectifying in comparison to Caucasian women (Frederick, Forbes, Grigorian & Jarcho, 2007). Previous research found that boys, who were not asked about their sexual orientation, typically reported experiencing less self-objectification and body shame in comparison to girls (Lindberg et al., 2007). However, Wiseman and Moradi (2010) found that gay men reported experiencing sexual objectification, had high levels of internalization and body shame, and engaged in self-objectification and disordered eating. Therefore, according to previous research it seems that objectification theory is relevant among diverse samples. It would be beneficial to determine if the results from the current study generalize across these groups to advance research on objectification theory and to inform interventions for individuals engaging in disordered eating behaviors.

Third, the data were cross-sectional so conclusions about stability and prediction between the constructs cannot be determined. The use of longitudinal data in future research could help determine the temporal relationships between these constructs. By learning more about the stability of these constructs over time and different developmental periods, researchers may be
able to better understand how some of them influence the latent constructs and could determine how well one variable is able to predict other variables over time.

Conclusions

This study integrated additional socialization experiences into the pathways of Moradi and Huang’s (2008) summary of objectification theory to provide empirical support for the specific relationships that lead to disordered eating behaviors and attitudes. For undergraduate women, Societal Pressures Regarding Weight and Body Size, Internalization of Cultural Standards of Beauty, Self-Objectification, Body Shame, and Internal Bodily Awareness consistently appear to play a role in the development of Bulimic Symptomatology. Specifically, Sexual Abuse led to Sexually Objectifying Experiences, Societal Pressures Regarding Weight and Body Size influenced Internalization of Cultural Standards of Beauty, and high levels Internalization of Cultural Standards of Beauty led directly to increased levels of Self-Objectification and Body Shame. In addition, high levels of Self-Objectification led directly to increased Body Shame, heightened Body Shame led directly to lower Internal Bodily Awareness, and lower Internal Bodily Awareness and high levels of Body Shame led to heightened reports of Bulimic Symptomatology. Although not supported consistently throughout the study, lower levels of Sexual Abuse may lead to greater self-objectification, greater Societal Pressures Regarding Weight and Body Size may lead to Sexually Objectifying Experiences, and Sexually Objectifying Experiences may lead to increased Self-Objectification. By integrating additional socialization experiences into Moradi and Huang’s (2008) model and empirically testing the integrated model, this study provides a cohesive model of objectification theory and information about the relationships that lead to disordered eating behaviors. As a result of this information, research within the objectification theory framework is extended and specific prevention and
intervention programs can be developed to address the high prevalence of disordered eating behaviors found within the college population.
### Table 1

**Descriptive Statistics and Correlations Between Measured Variables in Sample A (n = 313) and Sample B (n = 313)**

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Note. Sample A correlations are shown above the diagonal and Sample B below the diagonal. BSS = Body Shame Scale; OBCS-S = Objectified Body Consciousness Scale-Shame Subscale; OBCS-BS = Objectified Body Consciousness Scale-Body Surveillance Subscale (parcel 1 and 2); BAAR-PF = Beliefs About Attractiveness Scale-Revised, Importance of Being Physically Fit Subscale; BAAR-TA = Beliefs About Attractiveness Scale-Revised, Importance of Being Thin/Attractive Subscale; EDI-2-IA = Eating Disorders Inventory-2 Interceptive Awareness Subscale (parcel 1 and 2); ISOS = Interpersonal Sexual Objectification Scale (parcel 1 and 2); PSPS-LW = Perceived Sociocultural Pressures Scale, Pressure to Lose Weight Subscale; PSPS-TB = Perceived Sociocultural Pressures Scale, Pressure to Have a Thin Body Subscale; PSPS-E = Perceived Sociocultural Pressures Scale, Pressure to Exercise Subscale; PSPS-MA = Perceived Sociocultural Pressures Scale, Pressure to be More Attractive Subscale; CTQ = Childhood Trauma Questionnaire, Sexual Abuse subscale; SAHQ = Sexual Abuse History Questionnaire, Child Subscale; BULIT-R = Bulimia Test-Revised (parcel 1 and 2); SDS = Marlow-Crowne Social Desirability Scale Form B; * = p < .05; ** = p < .01.
### Table 2

**Means and Standard Deviations of Variables (n =313 per sample)**

<table>
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<tr>
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<th>Sample B</th>
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<td>SD</td>
<td>M</td>
<td>SD</td>
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*Note.* CTQ = Childhood Trauma Questionnaire, Sexual Abuse subscale; SAHQ = Sexual Abuse History Questionnaire, Child Subscale; PSPS-LW = Perceived Sociocultural Pressures Scale, Pressure to Lose Weight Subscale; PSPS-TB = Perceived Sociocultural Pressures Scale, Pressure to Have a Thin Body Subscale; PSPS-E = Perceived Sociocultural Pressures Scale, Pressure to Exercise Subscale; PSPS-MA = Perceived Sociocultural Pressures Scale, Pressure to be More Attractive Subscale; ISOS = Interpersonal Sexual Objectification Scale (parcel 1 and 2); BAAR-PF = Beliefs About Attractiveness Scale- Revised, Importance of Being Physically Fit Subscale; BAAR-TA = Beliefs About Attractiveness Scale-Revised, Importance of Being Thin/Attractive Subscale; OBCS-BS = Objectified Body Consciousness Scale- Body Surveillance Subscale (parcel 1 and 2); OBCS-S = Objectified Body Consciousness Scale- Shame Subscale; BSS = Body Shame Scale; EDI-2-IA = Eating Disorders Inventory-2 Interoceptive Awareness Subscale (parcel 1 and 2); BULIT-R = Bulimia Test-Revised (parcel 1 and 2).
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*Note.* CTQ = Childhood Trauma Questionnaire, Sexual Abuse subscale; SAHQ = Sexual Abuse History Questionnaire, Child Subscale; PSPS-LW = Perceived Sociocultural Pressures Scale, Pressure to Lose Weight Subscale; PSPS-TB = Perceived Sociocultural Pressures Scale, Pressure to Have a Thin Body Subscale; PSPS-E = Perceived Sociocultural Pressures Scale, Pressure to Exercise Subscale; PSPS-MA = Perceived Sociocultural Pressures Scale, Pressure to be More Attractive Subscale; ISOS = Interpersonal Sexual Objectification Scale (parcel 1 and 2); BAAR-PF = Beliefs About Attractiveness Scale- Revised, Importance of Being Physically Fit Subscale; BAAR-TA = Beliefs About Attractiveness Scale-Revised, Importance of Being Thin/Attractive Subscale; OBCS-BS = Objectified Body Consciousness Scale- Body Surveillance Subscale (parcel 1 and 2); OBCS-S = Objectified Body Consciousness Scale- Shame Subscale; BSS = Body Shame Scale; EDI-2-IA = Eating Disorders Inventory-2 Interoceptive Awareness Subscale (parcel 1 and 2); BULT-R = Bulimia Test-Revised ( parcel 1 and 2).
Table 4
*Model Fit for the Structural Models (n = 313 per sample)*

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<th>CFI</th>
<th>AIC</th>
<th>RMSEA (90% CI)</th>
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<td></td>
<td></td>
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<td>.077 (.068 - .086)</td>
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*Note.* df = degrees of freedom; NNFI = Non-normed Fit Index (> .95 indicates good fit); CFI = Comparative Fit Index (> .90 indicates good fit); AIC = Akaike Information Criterion; SRMR = Standardized Root Mean Squared Residual (< .08 indicates good fit); RMSEA = Root Mean Square Error of Approximation (90% Confidence Interval; < .06 indicates good fit); $\Delta\chi^2$ = change in chi-square values between the Model A and Model B. ** = $p < .001$. 


Figure 1. The eight constructs determined to be factors in the development of disordered eating according to Moradi and Huang’s (2008) review of objectification theory and previous research. The dashed line represents the additional pathway in Model B.
Figure 2. Final measurement model of the eight constructs determined to be factors in the development of disordered eating according to Moradi and Huang’s (2008) review of objectification theory and previous research. The dashed line represents the additional pathway in Model B.
Figure 3. Model B with standardized parameter estimates and disturbance terms.  

Sample A.  
Sample B.  
* = p < .05.
Figure 4. A condensed model of objectification theory based on Moradi and Huang’s (2008) review of objectification theory and the findings of the current study.
Adolescence is a time when multiple physical and psychological changes occur. During adolescence girls struggle to become more independent from their family and develop their own identities through establishing and strengthening relationships (Striegel-Moore, Silberstein, & Rodin, 1986; Tripp & Petrie, 2001). As girls develop, their relationships to others (e.g., friends) become a key factor in defining themselves; they are expected to care about the feelings and opinions of others. This relational orientation, however, can contribute to the experience of myriad psychological difficulties and emotions, such as anxiety, shame, guilt, and lower self-esteem (Paxton & Schulthorpe, 1991; Steiner-Adair, 1986; Striegel-Moore, 1995). In adolescence, girls also receive societally-based messages about the importance of being autonomous and independent and of devaluing relationships (Steiner-Adair, 1986). This apparent conflict between their developmental need to establish and maintain relationships and societal values of independence may create anxiety or concerns that result in girls becoming highly self-critical and being conflicted regarding their gender roles (Paxton & Schulthorpe, 1991; Steiner-Adair, 1986). Beauty, physical attractiveness, thinness and eating also are central to girls’ and women’s feminine identity (Striegel-Moore, 1995). In addition to experiencing relational changes, adolescence is a time when girls undergo dramatic physical change that often move them farther from the socially prescribed, yet unattainable thin-ideal (Grabe et al., 2007; Streigel-Moore, 1995). During adolescence, girls experience pubertal development that results in rapid bodily changes (e.g., increased adipose tissue, breast development, menarche, increased size of hips and thighs; Cross, 1993; Striegel-Moore et al., 1986). Girls often view the increasing body mass that occurs during puberty as a “fat spurt” that may contribute to their growing dissatisfaction with their bodies (Graber, Brooks-Gunn, Paikoff, & Warren, 1994; Stice & Whitenton, 2002; Streigel-Moore, 1995).
Girls’ focus on their increased body mass and body image concerns are often intensified by implicit and explicit sociocultural pressures from the media, family, and peers to meet the thin-ideal (Rodgers & Chabrol, 2009; Stice, 2002). As a result of adopting a relational orientation, girls and women are often more vulnerable to the opinions of others and are concerned about what others think of them (Striegel-Moore et al., 1986). In particular, girls’ and women’s feelings about themselves and their behaviors may be highly influenced by important people in their lives and comments about their shape and weight may lead to the overvaluation of physical appearance (Rodgers & Chabrol, 2009). In comparison to boys, adolescent girls report experiencing higher levels of weight-related teasing from peers, more maternal criticism about weight, more weight-loss discussions with their mothers, and greater weight-related teasing from their fathers (Rodgers & Chabrol, 2009; Schwartz, Phares, Tantleff-Dunn, & Thompson, 1999). Feedback from parents about appearance may lead to perceived pressures to conform to cultural ideals of thinness (Krones, Stice, Carla, & Orjada, 2005). Therefore, as a result of sociocultural pressures, many adolescent girls and young women encounter numerous messages about the importance of meeting cultural standards of beauty (Rodgers & Chabrol, 2009).

In addition to experiencing pressure from peers and family members, girls and women are exposed to sociocultural pressures to be thin, attractive, youthful, and sexy that are communicated through the media (Fredrickson & Roberts, 1997). Over the past several decades, there has been an increase in the number of articles and advertisements emphasizing weight loss, dieting, and exercise in women’s magazines, reflecting increased pressure for girls and women to achieve a specific body (Garner, Garfinkel, Schwartz, & Thompson, 1980; Wiseman, Gray, Mosimann, & Ahrens, 1992). The presence of these advertisements and ultra-thin models and actresses sends a message to western women that to be attractive and desirable they must be thin.
As a result of these messages, adolescent girls report feeling greater pressure than boys and men to meet the thin-ideal (Halliwell & Harvey, 2006; Peterson et al., 2007). For example, adolescent girls report experiencing greater pressure from the media to meet cultural ideals for physical beauty than do adolescent boys (Peterson et al., 2007). In addition, many girls and young women report internalizing these pressures and desiring a body that is consistent with the thin-ideal. Female undergraduates have reported rating their “ideal” bodies as thinner than their current bodies, the bodies they believe men will find attractive, and the bodies that men report finding attractive (Fallon & Rozin, 1985). Thus, it seems that many girls and women internalize pressures to meet the thin-ideal and are intensely focused on their appearance as a result of social messages that they must be thin to be considered physically attractive (Peterson et al., 2007).

As a result of socialization and pressures from significant others and the media, many girls and women receive subtle and direct messages about their physical appearance and how they need to look to be accepted and valued. For example, adolescent girls and boys both report giving greater feedback to female peers than to male peers regarding their physical appearance (McCabe & Ricciardelli, 2001). Further, Schwartz et al. (1999) found that parents were more likely to tease their daughters about their weight than their sons.

Individuals may feel more comfortable critiquing and commenting on girls’ and women’s appearance due to sociocultural messages that influence how others perceive the utility of the female body. Fredrickson and Roberts’ objectification theory (1997) suggests that individuals are socialized to view girls and women’s bodies as objects that exist for the pleasure of others. Because the female body is viewed as existing for the pleasure of others, individuals may feel more comfortable commenting on or critiquing girls and women’s appearances. The act of
viewing, and possibly critiquing, the female body as an object that exists independent of the girl or woman, is a core feature of objectification theory. In addition to explaining sociocultural pressures of beauty experienced by girls and women in Western society, objectification theory offers a unique perspective about how socialization influences girls and women’s psychological and physical health.

Sexual Objectification

With the increased focus on one’s physical and psychological self, adolescence has been defined as a critical period when sexual objectification occurs; in fact, girls as young as 12 years old have reported experiencing sexual objectification (Slater & Tiggemann, 2002). Objectification theory states that sexual objectification occurs when a girl or woman’s body is viewed and treated as an object that exists for the pleasure and use of others, particularly men (Fredrickson & Roberts, 1997). Sexual objectification can occur in many ways but most often happens through objectifying gazes when interacting with others, during visual media depictions of objectifying social interactions (e.g., a man staring at a woman who is unaware of his gaze), and when media focuses on women’s bodies or body parts (e.g., advertisements focusing on a woman’s body or body parts to sell products not associated with that area of her body) (Fredrickson & Roberts, 1997). Although the female body is visually inspected from a young age within Western culture, it is girls’ and women’s increased awareness that others are inspecting their bodies that can be detrimental and lead to psychological distress (Fredrickson & Roberts, 1997).

In addition to experiencing sexual objectification through gazes from other people and through images and messages in the media, girls and women may experience it as a result of traumatic experiences (e.g., sexual harassment, sexual assault) (Fredrickson & Roberts, 1997).
Traumatic, threatening bodily experiences, such as sexual abuse, may result in adolescent girls and young women experiencing increased anxiety about future potential evaluation of their bodies (Fredrickson & Roberts, 1997). Possibly as a result of their heightened awareness that their physical appearance will be evaluated by others in the future, which could increase the likelihood that they could be sexually victimized again, many women modify their appearance by wearing minimal makeup and dressing in ways that minimize their mature female bodies (i.e., wearing breast minimizing undergarments, dressing in conservative clothing) out of fear for their physical safety (Fredrickson & Roberts, 1997; Miner-Rubino et al., 2002). Because girls and women are unable to control others’ behaviors, gazes, and what is depicted in the media, they are usually unable to avoid sexually objectifying experiences even though they may make attempts to modify their appearance to reduce experiencing objectification (Aubrey, 2006; Fredrickson & Roberts, 1997).

In addition to cultural exposure to sexually objectifying experiences, objectification theory proposes that women are socialized to adopt and internalize an observer’s perspective of their body, that is, to self-objectify (Fredrickson & Roberts, 1997; Moardi & Huang, 2008). Women engage in self-objectification when they internalize an observer’s perspective of their body and treat themselves as objects to be looked at, evaluated, and compared to unrealistic body image standards (Fredrickson & Roberts, 1997). Although the thin-ideal is usually unattainable, many individuals habitually monitor their outward appearance (Fredrickson & Roberts, 1997). Body surveillance is defined as the extent to which a woman exists as an object to herself and relates to her body as an external onlooker (McKinley & Hyde, 1996). Girls and women use this habitual, self-conscious body monitoring as a strategy to help determine how others will perceive and treat them (Fredrickson & Roberts, 1997). Thus, in addition to being dissatisfied with the
size and shape of their changing bodies, as adolescent girls and young women become aware of sexual objectification and engage in self-objectification, they internalize the message that their mature female body is simply an object that belongs less to them and more to others (Fredrickson & Roberts, 1997; Muehlenkamp & Saris-Baglama, 2002).

Even brief objectifying experiences can have long-lasting effects through the development and/or intensification of self-objectification (Quinn et al., 2006; Tiggemann & Slater, 2001). When girls and women self-objectify, they are intensely focused on their bodies and often believe that they are defined by their physical appearance (Fredrickson & Roberts, 1997). Due to these beliefs and sociocultural influences, women who engage in self-objectification report experiencing psychological difficulties. Specifically, as a result of greater levels of internalization of the thin-ideal, and cultural messages of sexual objectification, girls and women are likely to engage in self-objectification, which often leads directly to lower internal bodily awareness and body shame and indirectly to disordered eating (Aubrey, 2007; Fredrickson et al., 1998; Greenleaf & McGreer, 2006; Miner-Rubino et al., 2002; Moradi & Huang, 2008).

According to objectification theory, some girls and women report difficulties detecting internal bodily sensations related to physical and psychological processes (Fredrickson & Roberts, 1997). Internal awareness is defined as the ability to discriminate between emotions and physical sensations of hunger and satiety (Tylka & Hill, 2004). Fredrickson and Roberts (1997) hypothesized that individuals may experience difficulties detecting bodily sensations as a result of feeling isolated from their bodies due to the self-objectification process.

As a result of the psychological resources that are tapped during self-objectification, many individuals experience disrupted cognitions (Quinn et al., 2006). For example, many
women may engage in self-conscious body monitoring that may impede their ability to concentrate and fully engage in other activities (Fredrickson & Roberts, 1997). Due to disrupted cognitions and attempts to refocus their attention away from self-objectification, many girls and women have fewer resources available for attending to internal processes, such as identification of emotions and physical sensations (Fredrickson & Roberts, 1997). Specifically, when girls and women self-objectify they may ask themselves, “How do I look?” rather than, “How do I feel?” (Daubenmier, 2005; Fredrickson et al., 1998). Furthermore, women who engage in self-objectification may also be aware of their physical sensations related to hunger and fullness but may be less likely to respond to the sensations due to their focus on their outward appearance and concern that they may not meet cultural ideals for thinness (Daubenmier, 2005).

Women who self-objectify also may experience extreme levels of negative emotions, such as body shame. Body shame often results from measuring oneself against an internalized cultural standard but failing to meet the standard (Moradi et al., 2005). As girls and women are reminded that they do not meet society’s standards for the female body, they may begin to believe that they are socially unacceptable (Fredrickson & Roberts, 1997). Due to this belief and the fact that they cannot comply with these cultural standards, girls and women may experience feelings of shame (Fredrickson & Roberts, 1997). Since body shame is hypothesized to motivate individuals to change aspects of the self that fall short, many girls and women are motivated to engage in unhealthy eating behaviors in hopes of reducing the shame they feel by changing their bodies to more closely approximate the societal thin-ideal (Noll & Fredrickson, 1998).

Thus, accurate awareness and responsiveness to physiological and emotional reactions are diminished by self-objectification, and may be related to disordered eating (Tylka & Hill, 2004). Furthermore, high levels of body shame intensify girls’ and women’s discomfort with
their bodies and inability to meet cultural standards of thinness. If one’s body is objectified and is seen as a hated object, girls and women may feel more detached from their bodies, less invested in caring for their bodies, and more likely to harm themselves through disordered eating behaviors (Muehlenkamp et al., 2005). Therefore, the combination of a low level of internal bodily awareness and responsiveness and a high level of body shame resulting from self-objectification may lead to disordered eating, and may be dangerous to girls’ and women’s health (Tylka & Hill, 2004).

Fredrickson and Roberts (1997) proposed objectification theory as a framework for understanding how socialization and sexual objectification of women can lead to mental health problems. Fredrickson and Roberts’ (1997) original sexual objectification framework suggested that as a result of objectifying experiences girls and women begin to self-objectify. Self-objectification leads to increased body shame and anxiety, and lower flow experiences and internal bodily awareness. According to the original objectification theory, high levels of body shame, anxiety, and low levels of flow and internal bodily awareness increases girls’ and women’s risk for developing disordered eating, depression, and sexual dysfunction (Fredrickson & Roberts, 1997). However, since the introduction of the theory, a great deal of research has explored the relationships between girls’ and women’s experiences of sexual objectification and mental health and has clarified the strength of the relationships between these variables (Aubrey, 2006; Calogero, 2004; Calogero et al., 2005; Grabe et al., 2007; Greenleaf & McGreer, 2006; Muehlenkamp & Saris-Baglama, 2002; Muehlenkamp et al., 2005; Slater & Tiggemann, 2002; Syzmanski & Henning, 2007; Tiggemann & Kuring, 2004; Tiggemann & Lynch, 2001; Tiggemann & Slater, 2001). In the next section, Moradi and Huang’s (2008) overview of
Objectification theory will be reviewed and rationale for empirically testing and extending their model will be provided.

Moradi and Huang’s (2008) review of objectification theory. Moradi and Huang (2008) reviewed the objectification theory literature and provided an overview based upon the extant empirical research. They suggested that certain constructs, such as sexually objectifying experiences, internalization of cultural standards of beauty, self-objectification, body shame, and internal bodily awareness, do interact together to increase girls’ and women’s likelihood of developing disordered eating attitudes and behaviors. Specifically, they found support for pathways from sexual objectification to internalization of cultural standards of beauty and to self-objectification (Fredrickson & Roberts, 1997; Moradi et al., 2005; Morry & Staska, 2001; Thompson & Stice, 2001). As a result of internalizing cultural standards of beauty, women may experience self-objectification and increased body shame (Moradi & Rottenstein, 2007; Moradi et al., 2005; Morry & Staska, 2001). Self-objectification was found to be associated with lower internal awareness (Fredrickson & Roberts, 1997; Muehlenkamp & Saris-Baglama, 2002; Quinn et al., 2006); lower internal awareness and greater body shame both were found to lead to eating disorder symptomatology (Augustus-Horvath & Tylka, 2009; Calogero et al., 2005; Daubenmier, 2005; Fredrickson et al., 1998; Kozee & Tylka, 2006; Moradi & Rottenstein, 2007; Moradi et al., 2005; Muehlenkamp & Saris-Baglama, 2002; Noll & Fredrickson, 1998; Sanchez & Kwang, 2007; Slater & Tiggemann, 2002; Tylka & Hill, 2004). Although Moradi and Huang (2008) constructed this overview of objectification theory from previous research that explored specific relationships within the objectification framework, the integrated model has not been tested and empirically supported in part or in its totality. Thus, a next step in objectification theory research
would be to test simultaneously multiple pathways in the model to better understand how sexually objectifying experiences lead to increased mental health difficulties.

In their recommendations for future research, Moradi and Huang (2008) suggested that it would be beneficial to extend the scope of research on sexual objectification and women’s health by exploring theoretically supported relationships. In particular, Moradi and Huang (2008) recommended exploring the role of safety anxiety (e.g., experiencing anxiety that one may be victimized) within the objectification framework. Although this may be a fruitful relationship to explore in the future, it may be more helpful to initially establish that there is a relationship between sexual objectification and previous sexual abuse. To date no research has explored how previous victimization (e.g., sexual abuse) is related to the more general experience of sexual objectification. In addition, internalization of sociocultural standards of beauty has been empirically supported in recent studies (e.g., Moradi & Rottenstein, 2007; Moradi et al., 2005; Morry & Staska, 2001), but variables that have previously been related to internalization (Calogero et al., 2005; Halliwell & Harvey, 2006; Keery et al., 2004; Myers & Crowther, 2007; Peterson et al., 2007; Stice, 1998; 2002; Thompson & Stice, 2001), such as perceived social pressures, have not been explored in the context of the model. To more fully understand objectification theory and the complex relationships between latent constructs that have and have not been specifically explored within objectification theory framework, further research is needed. Thus, the current study will integrate the constructs of sexual abuse and social pressures into the broad model of objectification articulated by Moradi and Huang (2008), and will test an integrated version of the model.
Proposed Model

The current study will empirically validate Moradi and Huang’s (2008) overview of objectification theory and will extend the model by integrating into it the constructs of sexual abuse and perceived sociocultural pressures to determine how they contribute to the psychological distress women experience in the objectification process. Specifically, the current study will explore how a history of sexual abuse may lead to a greater reported frequency of sexually objectifying experiences, and increased self-objectification. The relationship between perceived social pressures to adhere to the thin-ideal is expected to lead to more sexually objectifying experiences and greater levels of internalization. Sexually objectifying experiences are expected to lead to greater levels of internalization and self-objectification and greater levels of internalization are expected to lead to higher levels of body shame and self-objectification. The current study will also explore how self-objectification leads to greater body shame and lower levels of internal bodily awareness and responsiveness, and indirectly, to disordered eating. In the sections that follow, theoretical and empirical rationale will be provided for each pathway in the proposed model.

Sexual abuse. According to objectification theory, one way girls and women are sexually objectified is through abusive sexual experiences (Fredrickson & Roberts, 1997; Fredrickson et al., 1998). When girls and women are sexually abused, their bodies are viewed and treated as sexual objects or instruments by perpetrators (Fredrickson & Roberts, 1997; Fredrickson et al., 1998). Sexual abuse is defined as unwanted sexual contact, such as rape, coercion, fondling, or exposure (Bagley, 1990). Individuals may experience sexual abuse at any age and abuse can occur in a single episode, in a number of single episodes, or in an ongoing manner throughout the lifespan (Kaltman et al., 2005; Street & Arias 2001). National rates of
women reporting childhood sexual abuse range from 15-32%, depending on criteria used to define the abuse and measures used to assess it (Vogeltanz et al., 1999). Within the college population, rates of reported childhood sexual abuse have fluctuated between 5% (e.g., Amstadter & Vernon, 2008) and 40% (e.g., Follette et al., 1996) and lifetime estimates of sexual abuse range from 20% (Brener et al., 1999) to 60% (Tripp & Petrie, 2001).

Many women who experience abuse during childhood are revictimized later in life. Women who were abused as children may be at risk for future abuse due to a continuous state of psychological vulnerability, and are more likely to be sexually assaulted as adults in comparison to women who were not abused as children (Briere & Runtz, 1987; Campbell et al., 2008; Jun et al., 2008). Thus, girls and women who were previously abused and treated as objects are likely to be sexually revictimized and treated as objects in the future. Although research has consistently found that women who experienced sexual abuse may be at risk for greater psychological difficulties than women who have no trauma history (Kaltman et al., 2005; Tripp & Petrie, 2001), the influence of sexual abuse has not been explored within the framework of objectification theory.

According to objectification theory, women who experienced sexual abuse are likely to report greater levels of sexually objectifying experiences due to the emphasis on their body as an object during the abuse. Women often fear for their physical safety and may be constantly aware that they could be a target of sexual victimization (Fredrickson & Roberts, 1997; Miner-Rubino et al., 2002). As a result of sexual abuse, these women may engage in self-objectification in hopes of monitoring their physical appearance to reduce the likelihood that they will be attacked in the future. Girls and women use this habitual, self-conscious body monitoring as a strategy to help determine how others will perceive and treat them (Fredrickson & Roberts, 1997). Thus,
many women may modify their physical appearance to determine how others will treat them and reduce the likelihood that they will be perceived as an object in hopes of avoiding attacks (Miner-Rubino et al., 2002).

In addition to experiencing abuse, women may also engage in self-objectification because of their clothing choice and physical presentation. For example, some articles of women’s clothing (e.g., low necklines, short skirts) often require women to monitor and attend to their clothing and bodies to ensure that they are appropriately dressed and are not drawing unwanted, and potentially dangerous attention from others (Fredrickson & Roberts, 1997). According to objectification theory, women’s beauty is linked to social power. Some theorists suggest that women who are attractive are often viewed as threatening, and may be sexually targeted by men (Fredrickson & Roberts, 1997). In addition to being targeted, some women are blamed for being sexually assaulted due to their behaviors or clothing choices (Fredrickson & Roberts, 1997). For example, more attractive rape victims are often perceived as being more responsible for their attacks than less attractive victims (Fredrickson & Roberts, 1997). Therefore, in addition to concerns many women have that others may evaluate their physical appearance negatively, women may also be concerned that their physical appearance is actually threatening to others in a way that may place them in physical and psychological danger (Fredrickson & Roberts, 1997). Due to previous negative, objectifying experiences some women may experience chronic concern about the ramifications (e.g., physically, psychologically) of their appearance, which may increase the likelihood that they will engage in self-objectification (Fredrickson & Roberts, 1997).

Societal pressures regarding weight and body size. Current cultural trends emphasize thinness as an essential component of feminine beauty (Striegel-Moore et al., 1986). These
implicit and explicit messages from the media, family, and peers teach girls and young women to highly value their appearance (Rodgers & Chabrol, 2009; Stice, 2002; Calogero et al., 2005). Family members and peers may amplify the broader sociocultural messages girls and women experience about the importance of thinness (Twamley & Davis, 1999). Krones et al. (2005) suggested that feedback from others, such as one’s parents, about appearance may lead to perceived pressure to conform to cultural ideals of beauty.

Cultural messages about achievement for girls and women are often narrowly focused on their bodies; the culture promotes the idea that their bodies are perceived as "projects" to work on so that they can be perceived as attractive by others and be accepted by others (Brumberg, 1997). Pressures from the media, peers, parents, and others may reinforce social messages that it is acceptable to view girls’ and women’s bodies as modifiable objects. Objectifying media not only depict women as objects but also provides standards against which women should be evaluated (e.g., thin, youthful) and communicates how individuals should evaluate others’ bodies (August-Horvath & Tylka, 2009; Fredrickson & Roberts, 1997). As a result of the ubiquitous nature of these objectifying messages and pressures in western society, girls and women likely experience sexual objectification when their bodies are viewed as objects by others. For example, adolescent girls report higher levels of weight-related teasing, criticism about their weight and weight-loss discussions with their mothers, and feedback about their weight from their fathers than adolescent boys (Ata, Ludden, & Lally, 2007; Baker, Whisman, & Brownell, 2000; Schwartz et al., 1999). Due to these sociocultural messages and pressures, it seems likely that girls and young women are targeted to experience sexual objectification through evaluative gazes and comments about their bodies.
In addition to societal pressures being associated with sexual objectification, societal pressures are associated with internalization (Stice, 1998). Previous research has consistently found that disordered eating among girls and young women is often accompanied by a social environment (e.g., society, family, peers, dating partners) that reinforces the thin-ideal (Halliwell & Harvey, 2006; Nevonen & Broberg, 2000; Peterson et al., 2007; Rodgers & Chabrol, 2009; Stice, 1998; Stice & Agras, 1998; Twamley & Davis, 1999). Messages from the media, family, and peers teach girls and young women to overvalue appearance and internalize the thin-ideal (Calogero et al., 2005; Stice, 2002). Exposure to multiple sources of socialization (i.e., mothers, peers, media) that encourage the thin-ideal lead to greater investment in physical attractiveness for adolescent girls (Peterson et al., 2007).

Sociocultural pressures to be thin contribute to the development of disordered eating through the internalization of the thin-ideal among adolescent girls and young women (Stice, 1994; Stice & Agras, 1998). Internalization occurs when an individual incorporates specific values to the extent that they become guiding principles for the individual. Specifically, thin-ideal internalization is the process that occurs when girls and women assimilate societal beliefs about body size and shape and what it means to be attractive into their world view and then evaluate themselves based on these beliefs (Thompson et al., 2004). For example, women and girls often encounter messages and images from the media that suggest their physical appearance is associated with increased power, success, and life satisfaction (Tolman & Debold, 1994). As a result of these cultural messages, some girls and women believe that following sociocultural pressures to conform to the thin-ideal is a way to increase their success in life and gain respect from others (Nolen-Hoeksema & Girgus, 1994). As a result of believing that meeting western norms for size and physical appearance will lead to being valued by others and increased power,
many girls and women internalize societal messages and pressures to adhere to the thin-ideal and may desire to move closer toward the thin-ideal (Thompson & Stice, 2001). In addition to desiring increased power and respect, many individuals may internalize the thin-ideal because these attitudes are approved of by others that they admire or value (i.e., family, peers, media) (Kandel, 1980). Through comments and actions by respected others (e.g., criticism or teasing about weight, admiration of slender women, encouragement to diet to lose weight), the thin-ideal is reinforced and perpetuated (Thompson & Stice, 2001).

Empirically, internalization has been supported as resulting from general societal pressures regarding beauty and attractiveness that are communicated through the media, friends and family (Moradi & Huang, 2008; Thompson & Stice, 2001). For example, a high degree of family influence to be thin has been identified as a risk factor for experiencing increased thin-ideal internalization in a sample of undergraduate women (Twamley & Davis, 1999). In another sample of undergraduate women, Myers and Crowther (2007) found that high levels of awareness of media pressures to meet the thin-ideal were related to higher levels of internalization. Likewise, adolescent girls report greater pressure from the media to meet cultural ideals for physical beauty, and greater pressure to lose weight than adolescent boys (Halliwell & Harvey, 2006; Peterson et al., 2007). In addition to adolescent girls experiencing greater pressure than adolescent boys to lose weight, Halliwell and Harvey (2006) also found that pressure to lose weight led to greater internalization of sociocultural ideals of beauty. Shroff and Thompson (2006) found that peer and media influences directly led to high levels of internalization among a sample of adolescent girls and Keery et al. (2004) found that peer, media, and parental influence also directly led to high levels of internalization among a sample of adolescent girls. Therefore, it seems that societal pressures from family, peers, and the media
and internalization of cultural standards of beauty is an important relationship to explore within the objectification theory framework and as a precursor to developing disordered eating.

Sexually objectifying experiences. According to objectification theory, sexually objectifying experiences can lead to a high level of internalized cultural standards of beauty (Moradi & Huang, 2008). For example, Moradi et al. (2005) found that sexually objectifying experiences, such as hearing sexist comments about one’s body or clothing, led directly to higher levels of internalized cultural standards of beauty among an undergraduate sample of women. Possibly as a result of hearing others sexually objectify and evaluate their appearance, women’s beliefs about the importance of meeting sociocultural standards of beauty were reinforced, which led to higher levels of internalization. Due to others’ comments and actions related to viewing their bodies as objects (e.g., whistling, commenting on size or shape of one’s body) girls and women receive the message that their bodies are objects to be critiqued and should provide pleasure to others (Fredrickson & Roberts, 1997).

Because girls and women are often compared to cultural standards of beauty that are presented by individuals that they may value and respect, these girls and women are likely to internalize the messages of viewing their body as an object and the necessity of meeting cultural standards of beauty (Fredrickson & Roberts, 1997; Thompson & Stice, 2001). For example, previous research has found that obesity is negatively related to women’s social mobility, educational, and economic attainment and women who are viewed as more unattractive by co-workers have been described more negatively than women who are viewed as attractive (Fredrickson & Roberts, 1997). Thus, as a result of being viewed as an object in Western society and the likelihood that girls’ and women’s appearance could directly influence many areas of their lives, it is likely that these individuals will internalize cultural standards of beauty in hopes
of maximizing the likelihood of life success and increased power (Fredrickson & Roberts, 1997). Morry and Staska (2001) found that undergraduate women who were exposed to sexually objectifying magazines reported high levels of internalization of cultural standards of beauty and Moradi et al. (2005) also found that undergraduate women who had reported frequently experiencing sexual objectification reported high levels of internalization. Therefore, research has supported the relationship between experiencing sexual objectification and internalization of cultural standards of beauty.

In addition to experiencing higher levels of internalization due to sexual objectification, Fredrickson and Roberts (1997) suggested that individuals who have encountered sexually objectifying experiences are likely to redirect their attention towards their bodies and self-objectify. These women and girls may self-objectify because of increased self-consciousness, even if they are not in an objectifying situation or are being sexually objectified by others (Fredrickson & Roberts, 1997). Therefore, it seems that the effects of cultural pressures and sexually objectifying experiences can lead women and girls to be hypervigilant about the possibility that they will be evaluated by others, which often manifests through high levels of self-objectification. For example, Augustus-Horvath and Tylka (2009) found that sexually objectifying experiences led to increased self-objectification among a sample of undergraduate women and among a sample of women over the age of 25. Likewise, Moradi et al. (2005) found that reported sexually objectifying experiences led to self-objectification as manifested through body surveillance, and Kozee and Tylka (2006) demonstrated that experiencing sexual objectification led to body surveillance among samples of undergraduate heterosexual and lesbian women.
When women are exposed to sexually objectifying materials (e.g., beauty magazines, advertisements) they often engage in self-objectification. For example, Morry and Staska (2001) found that greater exposure to beauty magazines led to higher levels of self-objectification among a female undergraduate sample. Harper and Tiggemann (2008) found that exposure to magazine images of the thin-ideal led to increased self-objectification among a sample of Australian female undergraduates. Likewise, Calogero et al. (2005) found that internalized thin-ideals presented through media contributed to engaging in self-objectification among women who were seeking in-patient treatment for eating disorders. Since many women have internalized objectifying images into their self-perception, women may experience increased self-objectification as a result of being exposed to sexually objectifying material and due to viewing oneself as an object (Calogero et al., 2005).

Internalization of cultural standards of beauty. Moradi and Huang (2008) reported that internalization often mediates the relationship between sexual objectification experiences and body shame and between sexual objectification experiences and self-objectification. As a result of internalizing cultural standards of beauty many girls and women use their beliefs about the importance of meeting the thin-ideal to guide their behaviors and emotions (Thompson et al., 2004). Specifically, individuals who have high levels of internalization may engage in specific behaviors such as self-objectification and experience intense emotions, such as body shame (Moradi & Huang, 2008).

Since internalization refers to the extent to which an individual agrees with sociocultural ideals of attractiveness, as individuals report higher levels of internalization it seems likely that they would use behaviors such as self-objectification or body monitoring to estimate how similar their body is to the cultural ideal (Thompson & Stice, 2001). This may occur because
internalized cultural standards of beauty often encourage girls and women to watch their bodies as objects, which could lead to increased self-objectification (Sinclair, 2006). Because women who have internalized the societal ideal and essentially have a self-schema that is defined by how they look, they may feel increased pressure to evaluate their bodies on a continuous basis to ensure that their appearance remains close to the ideal (Fredrickson & Roberts, 1997).

Previous research has explored the relationship between internalization and self-objectification among different populations of women. Research conducted by Morry and Staska (2001) found that when undergraduate women were exposed to beauty magazines, internalization was related to increased self-objectification. Other researchers have explored the relationship between internalization and self-objectification without exposing participants to potentially objectifying media and have also found support for the relationship. For example, Moradi et al. (2005) found that internalization was directly linked to body surveillance among a sample of undergraduate women and Sinclair (2006) reported that high levels of internalization significantly predicted engaging in self-objectification among a sample of African American and Caucasian female undergraduates. These findings have been replicated in a sample of deaf women and among women who were pursuing in patient treatment for disordered eating (Calogero et al., 2005; Moradi & Rottenstein, 2007). Thus, according to previous research findings, it seems as though the relationship between internalization and self-objectification is strong and has been replicated with samples representative of many unique populations.

In addition to engaging in self-objectification as a result of internalization, girls and women may experience intense body shame (Moradi & Huang, 2008). Individuals experience body shame when they believe that they do not meet cultural standards of beauty and believe that others are aware of their inadequacy (Fredrickson & Roberts, 1997). Previous research has
explored the relationship between internalization and body shame in many different samples of women and has consistently provided support for the relationship between internalization and body shame (Moradi & Rottenstein, 2007; Moradi et al., 2005; Sinclair, 2006). For example, in a study of deaf women, Moradi and Rottenstein (2007) found that high levels of internalization led to body shame. Among a sample of undergraduate women Moradi et al. (2005) found that internalization was directly linked to body shame, and Sinclair (2006) reported that high levels of internalization significantly predicted body shame among African American and Caucasian female undergraduates. Therefore, it seems that internalization is a key component in understanding women’s health using the objectification theory framework.

Self-objectification. As a result of having internalized an observer’s perspective of their bodies and comparing themselves to cultural standards of beauty, many girls and women engage in body surveillance (McKinley & Hyde, 1996). By monitoring their appearance and their bodies, many girls and women may attempt to determine how others will perceive and treat them and often become extremely focused and concerned about their physical appearance (Fredrickson & Roberts, 1997). As a result of engaging in self-objectification many girls and women experience psychological difficulties such as high levels of body shame and low internal bodily awareness (Fredrickson et al., 1998; Miner-Rubino et al., 1995).

Girls and women who self-objectify often report experiencing negative emotions such as body shame (Fredrickson & Roberts, 1997; Moradi & Huang, 2008; Moradi et al., 2005). Individual experience body shame when they compare their physical appearance to the internalized cultural standard (e.g., the thin-ideal), and believe that they are unable to meet the standard (Moradi et al., 2005). As girls and women are reminded that they do not meet society’s standards for the female body, they may begin to believe that they are socially unacceptable and
often experience shame due to their inability to manipulate their bodies to meet the thin-ideal (Fredrickson & Roberts, 1997).

Previous research has strongly supported the relationship between self-objectification and body shame among samples of women and adolescent girls. For example, many researchers (e.g., Augustus-Horvath & Tylka, 2009; Calogero, 2004; Greenleaf & McGreer, 2006; Kozee & Tylka, 2006; Mercurio & Landry, 2008; Miner-Rubino et al., 2002; Moradi et al., 2005; Muehlenkamp & Saris-Baglama, 2002; Noll & Fredrickson, 1998; Tylka & Hill, 2004) have found that undergraduate women who reported high levels of self-objectification also reported high levels of body shame. In addition, Quinn et al. (2006) found that when undergraduate women were asked to try on a swimsuit in front of a full-length mirror they reported increased body shame as a result of engaging in self-objectification.

The relationship between self-objectification and body shame also has been supported among samples of older women, deaf women, women who are pursuing treatment for eating disorders, and adolescents. For example, among a sample of women who were pursuing in-patient treatment for disordered eating, self-objectification was directly linked with body shame (Calogero et al., 2005). Among a sample of deaf women, Moradi and Rottenstein (2007) found that self-objectification was directly related to body shame. Kozee and Tylka (2006) also found that among an undergraduate lesbian sample engaging in body surveillance was directly related to body shame, and Augustus-Horvath and Tylka (2009) reported that engaging in body surveillance was directly related to high levels of body shame for a sample of women whose ages ranged from 25 to 68 years. Furthermore, participating in self-objectification predicted increased body shame among a sample of adolescent girls (Grabe et al., 2007) and within samples of adolescent girls who were dancers and who were not dancers, self-objectification was directly
linked with body shame (Slater & Tiggemann, 2002). Therefore, multiple studies across a variety of different subgroups of women have confirmed that women and girls who have a greater tendency to self-objectify are more likely to experience body shame, suggesting that body shame is an important component in the objectification theory framework.

According to objectification theory, some girls and women report difficulties detecting internal bodily sensations related to physical and psychological processes as a result of engaging in self-objectification (Fredrickson & Roberts, 1997). These individuals may experience difficulties detecting bodily sensations as a result of feeling disconnected from their bodies and due to the use of cognitive resources (e.g., attention) that are needed to self-objectify (Fredrickson & Roberts, 1997; Hebl, King, & Lin, 2004; Quinn et al., 2006). For example, when girls and women self-objectify they are acting on the environment while also observing themselves acting on the environment (Quinn, Kallen, Twenge, & Fredrickson, 2006). As a result of their attention being divided between their actions and observing their actions, research has shown that women who engage in self-objectification also experience reduced performance on demanding concurrent activities (Fredrickson et al., 1998; Hebl et al., 2004). Possibly as a result of self-objectifying, many girls and women likely have fewer resources, such as focused attention, available for attending to internal processes such as identification of emotions and physical sensations (Fredrickson & Roberts, 1997). Although some research has supported the relationship between self-objectification and lower levels of bodily awareness, results across studies have been equivocal. One reason for these varied results is how researchers have chosen to define and measure internal awareness.

When internal awareness is defined as an individual’s level of consciousness related to bodily sensations, research has not supported the relationship between self-objectification and
internal bodily awareness (Szymanski & Henning, 2007; Tiggemann & Slater, 2001). For example, Szymanski and Henning (2007) reported that among a sample of women 18 to 63 years old, engaging in self-objectification was not significantly related to decreased internal bodily state awareness as measured by the Private Body Consciousness subscale (PBC) of the Body Consciousness Questionnaire (Miller, Murphy, & Buss, 1981). Likewise, Tiggemann and Slater (2001) found that undergraduate students and women who were former ballet students who engaged in self-objectification did not report lower levels of internal awareness of bodily states measured by the PBC. The PBC consists of items that ask about sensitivity to internal bodily tensions, hunger contractions of the stomach, dryness of the mouth and throat, feeling one’s heart beating, and changes in body temperature (Miller et al., 1981). Although some items on the PBC may focus on bodily sensations that are related to hunger and satiety signals (i.e., hunger contractions of the stomach) it also inquires about sensations that are typically not related to hunger and satiety signals (i.e., awareness of changes in body temperature).

However, when internal awareness is conceptualized and measured as individual’s awareness of their emotions and hunger or satiety signals, self-objectification has been directly related to lower internal awareness (Muehlenkamp & Saris-Baglama, 2002). For example, among a sample of undergraduate women Muehlenkamp and Saris-Baglama (2002) found that engaging in self-objectification was directly related to women’s reduced abilities to identify and explain their emotions to others. Therefore, it seems as though the relationship of self-objectification and internal awareness differs greatly depending on how the construct is defined and is measured. In the current study, internal awareness will be explored as an individual’s awareness of emotions, and hunger or satiety signals.
Body shame. Because body shame is hypothesized to motivate individuals to change aspects of the self that do not meet cultural standards, many girls and women may be motivated to engage in unhealthy eating behaviors in hopes of reducing their body shame by attempting to move closer to the thin-ideal (Noll & Fredrickson, 1998). For example, women with high levels of body shame report engaging in physically dangerous actions, such as modification of their bodies through cosmetic surgery, and smoking cigarettes to control their weight (Fiissel & Lafreniere, 2006; Forbes, Jobe, & Revak, 2006; Harrell, Fredrickson, Pomerleau, & Nolen-Hoeksema, 2006; Henderson-King, & Henderson-King, 2005; Moradi & Huang, 2008; Muehlenkamp et al., 2005). In addition to utilizing these behaviors to move closer towards the thin-ideal, some women who experience high levels of body shame also engage in pathogenic weight-control behaviors (e.g., restrictive eating, purging behaviors) in hopes of modifying their bodies and moving closer to the thin-ideal (American Psychiatric Association, 2004; Fredrickson et al., 1998; Moradi et al., 2005; Muehlenkamp & Saris-Baglama, 2002; Noll & Fredrickson, 1998; Piran & Cormier, 2005; Tiggemann & Kuring, 2004). Specifically, women who are ashamed of their bodies may attempt to decrease their shame by suppressing physical hunger and emotional cues in hopes of losing weight (Tylka & Hill, 2004).

Although dieting can initially reduce body shame through weight loss and movement towards the thin-ideal, Noll and Fredrickson (1998) reported that engaging in restrictive eating does not provide long-term relief from body shame. If girls or women are unable to achieve or maintain the thin-ideal after weight loss attempts, they may experience an increase in body shame and a decrease in their sense of personal control (Noll & Fredrickson, 1998). An increase in body shame and decrease in personal control may occur due to individuals’ perceived failures in controlling their eating behaviors, and ultimately, their bodies (Noll & Fredrickson, 1998).
Due to caloric deprivation, negative affect associated with dieting and body image concerns, these women may binge eat and thus experience more body shame, which motivates them to restrict more and sets up the potential for a binge-purge cycle to develop.

Research strongly supports the relationship between body shame and disordered eating. For example, body shame has been identified as a mediator between self-objectification and drive for thinness for women who were pursuing in-patient treatment for disordered eating (Calogero et al., 2005). Likewise, among undergraduate women and adolescent girls, body shame mediated the relationship between self-objectification and disordered eating (Greenleaf & McGreer, 2006; Moradi et al., 2005; Noll & Fredrickson, 1998; Slater & Tiggemann, 2002). Specifically, in Noll and Fredrickson’s (1998) study body shame predicted 29% of the variance in bulimic symptoms and 27% of the variance in anorexic symptoms. The direct relationship between body shame and disordered eating has also been supported in multiple studies with undergraduate women (e.g., Augustus-Horvath & Tylka, 2009; Greenleaf & McGreer, 2006; Kozee & Tylka, 2006; Moradi et al., 2005; Noll & Fredrickson, 1998; Sanchez & Kwang, 2007; Tylka & Hill, 2004).

The significant relationship between body shame and disordered eating also has been tested in laboratory settings and supported among samples of women older than traditional college students and representative of diverse populations. For example, Fredrickson et al. (1998) reported that college women’s high levels of self-objectification and body shame predicted restrained eating of cookies and candy in a laboratory setting, which provided a stronger test of the relationship than could be found using just self-report data. Among diverse samples of women, Moradi and Rottenstein (2007) found that body shame was directly linked to higher levels of disordered eating among a sample of deaf women, and Kozee and Tylka (2006)
found that body shame was directly linked with lesbian undergraduates. Among a sample of women between the ages of 25 and 68, Augustus-Horvath and Tylka (2009) also found a direct relationship between body shame and disordered eating. Therefore, previous research has strongly supported the relationship between body shame and disordered eating, making this a relevant relationship to explore more fully in the future.

Internal bodily awareness. Because many women and girls engage in self-objectification, they often experience difficulties recognizing and responding to internal emotional states, such as identification and expression of emotions, and recognition of physical sensations related to hunger and satiety (Tylka & Hill, 2004). As an attempt to move closer toward the thin-ideal, these women and girls are likely to focus more on their appearance and monitoring their body rather than on correctly identifying and responding to their emotional and bodily cues (Tylka & Hill, 2004). Since these individuals are not focused on indentifying and responding to their emotional and bodily cues due to their focus on appearance, they are likely to experience difficulties recognizing what they are experiencing emotionally and physically and may ignore important physical sensations that typically indicate hunger (Fredrickson & Roberts, 1997). As a result of trying to suppress hunger cues and emotions, these individuals may also experience a more generalized insensitivity to internal bodily cues (Fredrickson & Roberts, 1997). Due to ignoring or not honoring these sensations, these individuals may develop disordered eating behaviors.

Although the relationship between low levels of internal awareness and disordered eating has been supported, research has been mixed as a result of how internal awareness has been conceptualized and measured. When internal awareness is defined as awareness and responsiveness of emotions and hunger and satiety signals, research has generally supported the
relationship between low internal awareness and disordered eating. For example, Tylka and Hill (2004) and Kozee and Tylka (2006) found that poor awareness predicted unique variance for eating disorder symptomatology among samples of undergraduate women. In a sample of college students and women who practiced yoga, Daubenmier (2005) found that women who reported higher levels of internal awareness and greater responsiveness to their bodies reported lower levels of disordered eating. Augustus-Horvath and Tylka (2009) also found that low internal awareness predicted disordered eating among samples of undergraduate women and women between the ages of 25 and 68. However, when internal awareness is defined as an individual’s level of consciousness related to bodily sensations, research has not supported the relationship between low internal bodily awareness and disordered eating among samples of female undergraduates (Szymanski & Henning, 2007; Tiggemann & Slater, 2001). Therefore, it seems that exploring the relationship between accurate awareness and responsiveness to internal awareness may be more fruitful to explore in future research than women’s level of consciousness related to bodily sensations.

Disordered eating. Fredrickson and Roberts (1997) developed objectification theory to explain the sociocultural factors, in particular those related to the objectification and sexualization of young women, which lead to increased mental health concerns, such as disordered eating, for girls and women. As a result of the relationships and mechanisms explored by objectification theory, research has consistently found that girls and women often engage in unhealthy eating behaviors and some develop clinical eating disorders (Augustus-Horvath & Tylka, 2009; Fredrickson & Roberts, 1997; Greenleaf & McGreer, 2006; Kozee & Tylka, 2006; Moradi & Huang, 2008; Moradi & Rottenstein, 2007; Moradi et al., 2005; Muehlenkamp & Saris-Baglama, 2002; Noll & Fredrickson, 1998; Peterson, Grippo, & Tantleff-
Dunn, 2008; Slater & Tiggemann, 2002; Tiggemann & Kuring, 2004; Tiggemann & Lynch, 2001; Tiggemann & Slater, 2001; Tylka & Hill, 2004). Due to the vast amount of research that has explained the development of disordered eating through objectification theory, disordered eating will be the health outcome in the current study.

As a result of a variety of influences, including general sociocultural factors, disordered eating has a high prevalence rate in western society. Within the general population, the lifetime estimate for developing a clinical eating disorder among women is approximately 6% (American Psychiatric Association, 1994). Although the occurrence of eating disordered behavior has been empirically supported within many different populations, adolescence and early adulthood seem to be particularly vulnerable times when the onset of disordered eating occurs (Stice et al., 1998). For example, approximately 4% of adolescent girls and 5% of young adult women meet criteria for bulimia nervosa, 0.7% of young women meet criteria for anorexia nervosa, and prevalence rates for subclinical disordered eating behaviors among college women have ranged from 15% to 62% depending on the populations sampled (Graber et al., 2003; Hoek & van Hoeken, 2003; Kirk et al., 2001).

Prevalence rates among these populations may be high due to several factors specific to adolescence and early adulthood. Developing and utilizing eating disordered behaviors as coping mechanisms may be intensified by uncontrollable bodily changes that often begin and intensify during puberty (Favaro & Santonastaso, 1998; Favaro & Santonastaso, 2000; Ross, Heath, & Toste, 2009). Socially, during adolescence and early adulthood women’s and girls’ focus on dieting to move toward the thin-ideal is suggested to be an almost normative discontent felt towards their bodies (Fredrickson & Roberts, 1997; Rodin, Silbersteing, & Striegel-Moore, 1984). As discontent and dieting behaviors intensify, girls and women are more likely to engage
in disordered eating (Fredrickson & Roberts, 1997). Specifically, individuals who regularly restrict, purge, and binge may be attempting to modify their bodies to move closer toward the thin-ideal, in more extreme ways than the many women who occasionally engage in these behaviors (Fredrickson & Roberts, 1997).

Alternative Proposed Pathway

Due to the presented theoretical support and empirical findings, Moradi and Huang’s (2008) model was tested. In addition to the research supporting Moradi and Huang’s (2008) model, additional research that has explored the specific pathways of objectification theory (i.e., Augustus-Horvath & Tylka, 2009; Kozee & Tylka, 2006; Tylka & Hill, 2004) supported an alternative pathway from body shame to internal awareness. This research reported that women who experience body shame may ignore or suppress their internal bodily cues in hopes of restricting their caloric intake to lose weight and move closer to the thin-ideal (Augustus-Horvath & Tylka, 2009; Kozee & Tylka, 2006; Tylka & Hill, 2004). Although this pathway modified the original pathways proposed by Fredrickson and Roberts (1997) and the pathways suggested by Moradi and Huang (2008), it has been empirically supported.

For example, among samples of heterosexual and lesbian undergraduate women Kozee and Tylka (2006) found that body shame directly led to low internal awareness. In another study by Augustus-Horvath and Tylka (2009) body shame directly led to low internal awareness among samples of women between the ages of 18 and 24 and over the age of 25. Furthermore, among another sample of undergraduate women body shame accounted for 53% of the variance in low internal awareness (Tylka & Hill, 2004). Therefore, although the pathway between body shame and internal awareness was not suggested by Moradi and Huang (2008) it was explored due to recent empirical support within the objectification theory framework.
Summary and Conclusions

Western culture’s espousal of the thin-ideal is communicated in many ways, such as through media, and family and friends (Fredrickson & Roberts, 1997; Morry & Staska, 2001). As individuals are socialized to focus on and critique the physical appearance of girls and women’s bodies in comparison to the thin-ideal, many girls and women report that their bodies are often inspected by others and are objectified (Fredrickson & Roberts, 1997; Lee, 1994). According to objectification theory, sexual objectification occurs when girls and women are treated as bodies that exist for the use and pleasure of others (Fredrickson & Roberts, 1997). In addition to experiencing sexual objectification through interactions with others and the media, many individuals internalize an observer’s perspective of their bodies and engage in self-objectification (Fredrickson & Roberts, 1997). Objectification theory explains how these and other experiences heighten girls’ and women’s risk for developing psychological difficulties (Fredrickson & Roberts, 1997). Moradi and Huang’s (2008) review of objectification theory research provides a succinct, conceptual framework to better understand objectification theory.

Moradi and Huang’s (2008) summary of objectification research suggests that certain constructs, such as sexually objectifying experiences, internalization of cultural standards of beauty, self-objectification, body shame, and internal bodily awareness, interact together to increase girls’ and women’s likelihood of developing eating disordered attitudes and behaviors. Specifically, Moradi and Huang (2008) found support for pathways from sexual objectification to internalization of cultural standards of beauty and to self-objectification (Fredrickson & Roberts, 1997; Moradi et al., 2005; Morry & Staska, 2001; Thompson & Stice, 2001). As a result of internalizing cultural standards of beauty, girls and women may engage in self-objectification and experience increased body shame (Moradi & Rottenstein, 2007; Moradi et al.,
Self-objectification has been associated with lower internal awareness (Fredrickson & Roberts, 1997; Muehlenkamp & Saris-Baglama, 2002; Quinn et al., 2006) and lower internal awareness and greater body shame have both led to eating disorder symptomatology (Calogero et al., 2005; Fredrickson et al., 1998; Moradi et al., 2005; Muehlenkamp & Saris-Baglama, 2002; Noll & Fredrickson, 1998). In addition to these constructs, research has also found relationships between other important sociocultural factors, such as sexual abuse and societal pressures, and constructs associated with objectification theory (Calogero et al., 2005; Fredrickson & Roberts, 1997; Krones et al., 2005; Miner-Rubino et al., 2002; Rodgers & Chabrol, 2009; Stice, 1994; 2002; Stice & Agras, 1998; Thompson & Stice, 2001; Twamley & Davis, 1999). It is hypothesized that a history of sexual abuse may lead to a greater frequency of sexually objectifying experiences and increased self-objectification, and perceived social pressures to adhere to the thin-ideal may lead to more sexually objectifying experiences and greater levels of internalization.

Simultaneously testing the proposed pathways of Moradi and Huang’s (2008) summary of objectification theory will provide empirical support of the complex relationship among these constructs. By integrating other important, related constructs into their model, greater knowledge about the specific relationships that may lead to disordered eating behaviors and attitudes will be gained. Establishing a cohesive, empirically sound model of objectification theory will not only provide a foundation for future research, but will also provide more accurate information about the mechanisms and relationships that lead to the development of disordered eating. Through increased information, specific prevention and intervention programs can be developed to address the alarmingly high rates of disordered eating among girls and women living in Western society.
Current Study

The purpose of this study was to empirically replicate and extend the model hypothesized by Moradi and Huang’s (2008) summary of objectification research. In addition to simultaneously testing the pathways suggested by Moradi and Huang (2008), the current study integrated other constructs, such as sexual abuse and social pressures, that have previously been related to constructs generally included in the objectification theory framework. The study aimed to measure the rates of sexual abuse and perceived societal pressures to determine if they were significantly related to the development of bulimic symptomatology according to the objectification theory framework within a female undergraduate sample. In addition, the study explored the relationship between sexual objectification, internalization, self-objectification, body shame, internal awareness, and bulimic symptomatology among a female undergraduate sample.

Based on previous research and Moradi and Huang’s (2008) review of objectification theory research, the following hypotheses were proposed for the study:

1. Consistent with Moradi and Huang’s (2008) overview of objectification theory, high levels of sexually objectifying experiences would lead to high levels of self-objectification, which may be mediated by high levels of internalized cultural standards of beauty. High levels of internalized cultural standards of beauty would lead to greater body shame. Self-objectification would also lead to greater body shame, and lower levels of awareness and responsiveness to internal bodily states. Women with high levels of body shame and low levels of internal bodily awareness and responsiveness would report elevated levels of bulimic symptomatology.
2. As an extension of Moradi and Huang’s (2008) overview of objectification theory, it was hypothesized that women who experienced sexual abuse would report more sexually objectifying experiences and would engage in self-objectification more frequently than women who do not have a history or sexual abuse. Perceived social pressures from family, peers, and the media were also expected to result in higher levels of sexually objectifying experiences and greater internalization of cultural standards of beauty.
APPENDIX B

DEMOGRAPHIC QUESTIONNAIRE
DEMOGRAPHICS

I. Background Information
1. Age: ______________
3. Current Academic Status: ___Freshman ___Sophomore ___Junior ___Senior
   ___5th Year
4. Race/Ethnicity:
   _____African-American/Black
   _____American Indian
   _____Asian American/Pacific Islander
   _____Caucasian/White
   _____Hispanic/Latino/Mexican American
   _____Other (specify: _________________)

II. Weight History
1. Present height: ____________ feet _____________ inches
2. Present weight: ______________ pounds
   a. Length of time at current weight: _______ (months)
3. Are you satisfied with your current weight? ____ Yes    ____ No
   a. If NO, do you consider yourself to be: ____ overweight   ____ underweight
4. Ideal weight: _______________ pounds
5. My body frame is: _____Small _____Medium  _____Large
6. Lowest weight in past 2 years:______
7. Highest weight in past 2 years:______
8. Have you ever been diagnosed or treated for:
   Anorexia Nervosa? _____ Yes _____ No (If YES, indicate when __________)
   Bulimia Nervosa? _____ Yes _____ No (If YES, indicate when __________)
   Other Eating Disorder _____ Yes _____ No
   (If YES, please indicate what disorder and when _________________________)

III. Menstrual History
1. Have you ever had a menstrual period? _____Yes _____No
   a. If YES, how old were you when you had your first menstrual period? ______
2. How many menstrual cycles have you had in the past 12 months? ______
3. On average, during the past 12 months, how many days have there been between your
   menstrual cycles? ______
4. On average, during the past 12 months, how many days do your periods (bleeding) last?

   ____________________________
5. If you have taken hormone based birth control during the past 12 months, please indicate the
   effect it has had on your menstrual cycle.
University of North Texas Institutional Review Board

Informed Consent Form

Before agreeing to participate in this research study, it is important that you read and understand the following explanation of the purpose, risks, and benefits of the study and how it will be conducted.

Title of Study: Physical and Psychological Health of Female Undergraduates

Principal Investigator: Trent Petrie, Ph.D. University of North Texas (UNT) Department of Psychology

Co-Investigators: Sarah Phillips and Whitney Neal, doctoral students in the University of North Texas (UNT) Department of Psychology

Purpose of the Study: You are being asked to participate in a research study that involves understanding the relationship between psychological and environmental variables and the health behaviors of college women.

Study Procedures: You will be asked to complete online questionnaires that will take about 45 minutes of your time.

Foreseeable Risks: The potential risks involved in this study are minimal, though you will be asked questions about your current and past physical health (e.g., menstrual cycles, weight), psychological health (e.g., current eating habits, if you have previously been diagnosed with an eating disorder), and sexual abuse history (e.g., sexual abuse as a child, adolescent, or adult) that may be sensitive. At the end of the study, the researchers will provide you with a list of on-campus resources should you want to discuss any issues or topics that are covered during your participation in the study.

Benefits to the Subjects or Others: Your participation in this study is expected to contribute to the field of psychology by helping professionals to better understand which factors predict the physical and psychological health of college women.

Compensation for Participants: During the fall semester, if your class provides extra credit for participation you will receive one extra credit point for each half-hour of time spent participating in the study. If you would not like to participate in this study, your class may offer an alternative activity that would require equal effort and time to earn the same amount of extra credit. After you have completed the questionnaires, all research participants will be entered into a drawing for one of six $50.00 cash prizes.

Procedures for Maintaining Confidentiality of Research Records: The researcher will act to protect your confidentiality as a participant of this project. As such, you will provide no identifying information, such as your name, in relation to the questionnaires in the survey. Your responses will be identified only through code number. The only place where you will provide identifying information is on the final page at the end of the study. On that page we will request your name and email address so we may verify your participation in the study for any extra credit you may receive in conjunction with one of your classes and to notify you if you are selected as a winner of one of the $50.00 cash prizes. Your name and email will not be
associated with the answers you provide on the questionnaires. Also, data from this study will be published or presented in aggregate form only, which means that no individual data will be disclosed.

**Questions about the Study:** If you have any questions about the study, you may contact Sarah Phillips or Whitney Neal at telephone number (940) 565-2631 or Dr. Trent Petrie, Ph.D., UNT Department of Psychology, at telephone number (940) 565-2671.

**Review for the Protection of Participants:** This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). The UNT IRB can be contacted at (940) 565-3940 with any questions regarding the rights of research subjects.

**Research Participants’ Rights:** Clicking the “I Agree” button below indicates that you have read or have had read to you all of the above and that you confirm all of the following:

- The study has been explained to you and you have had the opportunity to ask questions.
- You have been told the possible benefits and the potential risks and/or discomforts of the study.
- You understand that you do not have to take part in this study, and your refusal to participate or your decision to withdraw will involve no penalty or loss of rights or benefits. The study personnel also may choose to stop your participation at any time.
- You understand why the study is being conducted and how it will be performed.
- You understand your rights as a research participant and you voluntarily consent to participate in this study.
- You have been told you may print this page to receive a copy of this form.
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