

SELF-OBJECTIFICATION, RISK TAKING, AND SELF-HARM IN COLLEGE WOMEN

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Objectification theory proposes that the objectification of women's bodies causes women to self-objectify, adopting an outsider's view of themselves. Engaging in a high amount of self-objectification is thought to place women at increased risk for mental health problems such as body dissatisfaction and depression. It was hypothesized that self-objectification would contribute to negative body regard and depression, which would increase participation in risk-taking and self-harmful behaviors. Structural equation modeling was used to test a model of risk for self-harm based upon objectification theory in a sample of 391 college women. Results indicate that the model provided a good fit to the data, but only the paths from self-objectification to negative body regard, negative body regard to depression, and depression to self-harm were significant. Implications of these findings for objectification theory and our understanding of self-harm in women are discussed.

Researchers acknowledge that a dysfunctional view of or negative attitude toward the body is critical for self-harmful behavior (Orbach, 1996; Walsh & Rosen, 1988). It is argued that a negative view of the body may facilitate self-harm because the body is seen as a hated object. Adopting this view makes it more likely that an individual will feel detached from her/his body and the emotional investment in caring for the body will decline, making it easier to harm. Emphasizing the role of the body in self-harm may help explain why some studies report that more women self-injure (Zlotnick, Mattia, & Zimmerman, 1999) and attempt suicide than men (Moscicki, 1994; Spicer & Miller, 2000). It is well known that women frequently report feeling dissatisfied or disgusted with their bodies (Cash & Henry, 1995; Garner, 1997), that body dissatisfaction is associated with increased depressive symptoms (Kostanski & Gullone, 1998; Rierdan & Koff, 1997), and that depression is a risk factor for self-harm (Darche, 1990; Favazza, 1996). These findings suggest that women's negative experiences with their bodies may contribute to their increased risk for engaging in self-harmful behaviors. Some theorists believe that women's body dissatisfaction, risk for self-harm, and disorders such as depression are the result of societal and cultural influences that devalue and objectify the female body (Harned, 2000; Nolen-Hoeksema, 1990; Shaw,

2002). Fredrickson and Roberts (1997) offer objectification theory to explain how Western culture may contribute to the development of such mental health problems in women.

Objectification of women occurs when a woman's body, parts of her body, or sexual capabilities are separated from her person and regarded as representing her in exclusion of other personal attributes. Objectification theory (Fredrickson & Roberts, 1997) proposes that societal objectification of women teaches them to internalize an outsider's view such that a woman comes to see herself as an object to be evaluated. Adopting a self-objectified view can lead women to develop an objectified body consciousness (McKinley & Hyde, 1996) characterized by continual monitoring of one's appearance and subsequent negative attitudes or feelings toward the body. Having an objectified body consciousness is believed to place women at greater risk for mental health problems such as depression and disordered eating. Along a similar vein, Shaw (2002) proposes that the cultural objectification of women sets the stage for self-harm. Specifically, Shaw contends that self-harm is both an expression of and a consequence of self-objectification, arguing that the act of self-harm is a self-inflicted physical replication of the cultural and relational objectification women encounter. However, the relationship between self-objectification and self-harm has not been empirically assessed. The purpose of the current study was to expand the applicability of objectification theory and test whether it could account for self-harmful behavior in women.

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Objectification Theory, Body Dissatisfaction, and Depression

A small but growing body of research offers support for the basic tenets of objectification theory. For example, it has been found that self-objectification is predictive of body shame and restrictive eating, and that body shame partially mediates the relationship between self-objectification and restrictive eating (Fredrickson, Roberts, Noll, Quinn, & Twenge, 1998; McKinley, 1998; Noll & Fredrickson, 1998; Tiggemann & Slater, 2001). Other studies have found that self-objectification was predictive of depressive symptoms in college-age women (Miner-Rubino, Twenge, & Fredrickson, 2002; Muehlenkamp & Saris-Baglama, 2002). These findings suggest that self-objectification may be an important variable contributing to negative body regard (i.e., body dissatisfaction and reduced investment in the body) and depressive symptoms in women. Additionally, several studies have found that body dissatisfaction contributes to the development of depressive symptoms in females (Denniston, Roth, & Gilroy, 1992; Mori & Morey, 1991; Stice & Bearman, 2001; Stice, Hayward, Cameron, Killen, & Taylor, 2000). Thus, it would appear that self-objectification and negative body regard would increase women's risk for depression. Additionally, researchers have identified depressive symptoms as risk factors for the emergence of self-harmful behavior (Bennum & Phil, 1983; Favazza, 1996; Walsh & Rosen, 1988). Therefore, it is hypothesized that self-objectification may also contribute to our understanding of self-harm in women.

Self-Objectification and Self-Harm

As mentioned earlier, having a negative view of one's body is thought to facilitate bodily harm because of the disregard for the body that can emerge from body dissatisfaction/disgust. Self-objectification may indirectly contribute to self-harm as a result of negative body regard. To date there are no known studies that have specifically examined a relationship between self-objectification and self-harm in women. However, a few studies with adolescents have found that negative attitudes toward the body, body detachment, and body alienation are predictive of self-injurious and suicidal behavior.

In their book, Walsh and Rosen (1988) describe a study in which body alienation emerged as the single most important predictor of self-harm in a sample of self-injuring adolescents. Darche's (1990) results showed that adolescents who self-injured reported significantly less body comfort than those who did not self-injure. These two findings support an association between negative body regard and self-harm; however, they are based on small samples. Orbach, Lotem-Peleg, and Kedem (1995) assessed body perceptions and attitudes among suicidal, depressed, and normal male and female adolescents. Regardless of gender, adolescents who had attempted suicide reported significantly more negative body regard as well as greater amounts of body dissoci-

ation, which was predictive of suicidal behavior (see also Orbach, Mikulincer, Stein, & Cohen, 1998; Orbach, Stein, & Mirit-Har, 2001). Although their participants were adolescents, the results do indicate that negative body regard and body detachment are risk factors for suicidal behavior and, by association, self-harm. Thus, it is possible that self-objectification could be related to self-harm in women through its association with negative body regard.

Body Regard and Risk Taking

In addition to increasing risk for self-harm, negative body regard may contribute to participation in risk-taking behaviors such as drug use, unsafe sexual practices, and general risk behaviors (e.g., driving without a seatbelt, fighting, carrying a gun). Although the relationship between body regard and risk-taking behaviors has not been established, some rudimentary evidence exists to support our hypothesis. Cross (1993) outlined a theoretical process in which females alienate themselves from their body, evaluating themselves as an object, and become prone to eating disorders and self-mutilation; both of which are associated with risk-taking behavior (Braithwaite, Robillard, Woodring, Stephens, & Arriola, 2001; Carroll, Riffenburgh, Roberts, & Myhre, 2002). In a study by Robinson et al. (1987) adolescent self-induced vomiting and use of pills, laxatives, or diuretics to control weight were correlated with general risk-taking behaviors, substance use, and cigarette smoking. More recently, frequencies of cigarette and alcohol use were linearly related to eating-disorder attitudes including body dissatisfaction and drive for thinness among college women (Granner, Black, & Abood, 2002). These findings weakly suggest that a negative view of the body, implied by the use of extreme weight control methods, may be associated with increased risk behavior.

Risk Taking and Self-Harm

There is a growing body of research demonstrating that individuals who engage in risk-taking behavior are at increased risk for self-harmful behavior, and that depression is related to increased participation in risk taking. Windle, Miller-Tutzauer, and Domenico (1992) found that risk-taking behaviors were significant predictors of suicidal ideation and attempts. Additionally, a National College Health Risk Behavior Study found students who reported suicidal ideation were more likely to carry a weapon, engage in a physical fight, boat or swim after drinking alcohol, and rarely or never use a seatbelt than students who did not report suicidal thoughts (Barrios, Everett, Simon, & Brener, 2000). The most frequently reported risk-taking behaviors associated with self-harmful behavior appears to be risky sexual activities and drug or alcohol abuse. Stiffman, Dore, Earls, and Cunningham (1992) reported that youths with suicidal symptoms were more likely to use intravenous drugs, engage in prostitution, and have multiple sex partners than are youths who do not report suicidal symptoms. Additionally,

substance abuse was reported by 23 to 42% of adolescent suicide attempters seen in general hospitals in the United States (Spirito, Brown, Overholser, & Fritz, 1989), while 70% of suicide completers (age 12–19) were found to abuse alcohol and drugs (Shafii, Carrigan, Whittinghill, & Derrick, 1985).

Substance use and risk-taking behavior have also been found to correlate with depressive symptoms (Allgower, Wardle, & Steptoe, 2001; Kandel, Raveis, and Davies, 1991). In a 1-year longitudinal study, Tschann and colleagues (1994) found that emotional distress at Time 1 predicted substance use at Time 2, and that the more distressed students reported greater substance use than the less distressed students. Pesa, Cowdery, Westerfield, and Wang (1997) found that females who reported depressive symptoms were more likely to risk riding in a car with an intoxicated driver, engage in two or more physical fights in the past year, smoke cigarettes, and engage in more risky behaviors than females without depressive symptoms. Participation in risky sexual behaviors such as prostitution was also found to be related to depressive symptoms (Shrier, Harris, Sternberg, & Beardslee, 2001; Stiffman et al., 1992). These findings demonstrate a link between depression and risk taking and suggest that depressive symptoms may increase one's propensity for risk-taking behaviors.

Summary and Proposed Model

Taken as a whole, the research seems to indicate that risk taking, depression, and negative body regard may be risk factors for self-harm. Research has established that self-objectification processes contribute to a negative view of the body as well as depressive symptoms, and that depression and body attitudes are related to each other. The association between depression and self-harm has been established and there is growing support for a relationship between negative body attitudes and both self-harmful and risk-taking behaviors. In addition, the research seems to indicate that increased risk taking may be associated with self-harm. Therefore, we hypothesized that self-objectification would contribute to negative body regard and depressive symptoms, which would lead to participation in risk-taking behaviors and subsequent self-harm (see Figure 1).

METHODS

Participants

Four hundred thirteen female undergraduates from a medium sized university in the Midwest participated in the study. Twenty-two participants were dropped from the analyses as a result of incomplete data, resulting in a total sample size of 391. The mean age of the sample was 19.15 years ($SD = 1.97$). Most of the participants were freshmen (68.8%) or sophomores (21.3%). The ethnic composition of the sample reflected the campus's diversity with a majority of participants identifying as European American (88.6%).

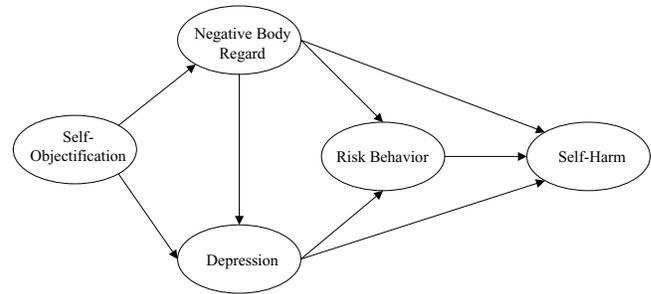


Fig. 1. Hypothesized full model of self-objectification and self-harm. All parameter estimates are significant at the $p < .01$ level.

Participants identifying as African American consisted of 5.1% of the sample, 1.9% identified as Hispanic/Latina, 1.7% as Asian American, and 2.7% did not indicate their ethnicity.

Procedure

Participants were recruited from introductory psychology classes and were offered credit toward the completion of class requirements. Due to space limitations, participants met in groups of up to 25 individuals. Following informed consent procedures, participants were given a packet of questionnaires. Items from each of the measures included were dispersed and counterbalanced throughout the packet. Participants completed the questionnaires within an hour. The current study represents a subset of data collected as part of a larger project studying the role of self-objectification in disordered eating and depression (see Muehlenkamp & Saris-Baglama, 2002).

Measures

Objectified Body Consciousness Scale (OBCS). The OBCS (McKinley & Hyde, 1996) is a 24-item self-report measure assessing three aspects of objectified body consciousness. The surveillance subscale consists of items tapping self-objectification in the form of appearance monitoring and adopting an outsider's view of the self. The body shame subscale measures feelings of inadequacy and shame regarding one's body, and the appearance control subscale measures perceived control over physical appearance. Items are answered according to a 7-point scale with anchors ranging from *strongly agree* to *strongly disagree*. The OBCS was created and normed within college-age samples and has demonstrated adequate reliability ($\alpha = .76$ to $.89$; McKinley & Hyde, 1996). Evidence of validity of the OBCS is provided by moderate and significant correlations with other measures of body esteem, body dissatisfaction, public self-consciousness, and appearance orientation (McKinley & Hyde, 1996). Scores are obtained by averaging item responses within each subscale, with higher scores indicating greater amounts of surveillance, body-shame, and control beliefs. To ensure an adequate number of indicators

of self-objectification, three item parcels from the surveillance subscale were created by averaging response values across the items in each parcel. The surveillance subscale had adequate internal consistency ($\alpha = .74$). The body shame subscale was used as an indicator of negative body regard ($\alpha = .77$). The appearance control subscale was not used.

Body Investment Scale (BIS). The BIS (Orbach & Mikulincer, 1998) is a 24-item scale assessing emotional investment in the body as it pertains to self-destructive behaviors. The BIS has four subscales: feelings and attitudes toward the body (e.g., "I am satisfied with my appearance"), comfort with physical touch (e.g., "I enjoy physical contact with other people"), body care (e.g., "I like to pamper my body"), and body protection (e.g., "I am not afraid to engage in dangerous activities"). Each of the four subscales contains 6 items, which are answered according to a 5-point scale with anchors ranging from *strongly disagree* to *strongly agree*. Scores for each subscale are obtained by averaging item responses within each factor with higher scores indicating more positive feelings about the body, more comfort with touch, and greater body care and protection. Orbach and Mikulincer (1998) report that the internal consistency of the scale is adequate ($\alpha = .75$ to $.92$). Research with the BIS has also provided evidence of adequate validity (Orbach & Mikulincer, 1998; Orbach et al., 2001). In the current study the protection subscale item, "Sometimes I purposefully injure myself," was used as an indicator of self-harm and was not included in the calculation of the subscale score, which was used as an indicator of risk-taking behavior ($\alpha = .65$). The attitude toward the body and comfort with touch subscales ($\alpha = .92$ and $.79$) were included as indicators of negative body regard. The body care subscale was dropped from analyses due to unreliability ($\alpha = .41$).

Center for Epidemiological Studies Depression Scale (CES-D). The CES-D (Radloff, 1977) is a 20-item self-report inventory assessing depressive symptoms. Items are answered according to a 6-point scale ranging from *always* to *never*. The CES-D was designed as a research instrument and has demonstrated validity for use as a measure of depressive symptomology among nonclinical samples (Shaver & Brennan, 1991). The CES-D has established strong internal consistency, with alpha estimates ranging from $.76$ to $.90$ (Radloff, 1977; Shaver & Brennan, 1991). In order to have multiple indicators of depression in the current study, three item parcels containing 6 to 7 items were created by randomly selecting items for each parcel, a procedure consistent with statistical recommendations (see Hoyle, 1995; Kline, 1998). Scores for each of the item parcels were calculated by summing item responses within each parcel with higher scores indicating a greater number of depressive symptoms. Each item parcel, labeled *depress1*, *depress2*, and *depress3*, obtained adequate alphas of $.76$, $.73$, and $.81$, respectively.

National College Health Risk Behavior Survey (NCHRBS). The NCHRBS (Centers for Disease Control and Prevention [CDC], 1995) is a questionnaire designed by the CDC to assess the extent to which adolescents and young adults engage in various health-risk behaviors. The NCHRBS is widely used in epidemiological studies of adolescent and young adult behaviors, and has been found to be a reliable indicator of risk-related behaviors (Brener, Collins, Kann, Warren, & Williams, 1995). The current study selected 30 items from the NCHRBS that asked about the frequency of drug and alcohol use (13 items; e.g., "How often have you used marijuana in the past month?"); sexual risk behaviors (6 items; e.g., "How often have you used a condom when having sex?"); self-harm (1 item; e.g., "How often do you purposefully harm yourself? e.g., cutting, burning, etc."); and general injury-related behaviors (6 items; e.g., "How often do you use a seatbelt?"). Items pertaining to sexual behavior were worded in gender-neutral terms (i.e., "partner"). However, items may have implied heterosexual interactions and thus may not have pertained to lesbian participants. Items asked about the frequency of a particular behavior within the past month and during the participants' lifetime, and were answered according to a 6-point scale ranging from *always* to *never*. Items asking about a particular number of experiences (e.g., "How many sexual partners have you had in the past month?") were answered according to a 5-point scale with 1 indicating a response of *1 to 2* and 5 indicating a response of *7 or more*. Items assessing drug and alcohol use were combined to create a drug use subscale, and items assessing sexual behaviors were combined to create a sexual risk subscale. Items assessing general risk behaviors were combined to create a general risk subscale. The item assessing intentional self-harm was used as an indicator of self-harm. Subscale totals for each of the domains assessed were calculated by averaging participants' scores across all items within each category. Reliability analyses indicated that the drug use ($\alpha = .85$) and sexual risk ($\alpha = .72$) scales had adequate internal consistency; these scales were used as indicators of risk behavior. The general risk scale was found to be unreliable ($\alpha = .37$) and was dropped from analyses.

Self-Harm. A specific measure of self-harm was not used in this study. Consequently, the item assessing intentional self-harm on the BIS (Orbach & Mikulincer, 1998) and the item measuring self-harm from the NCHRBS (CDC, 1995) were used as indicators of the latent construct of self-harm in the model. The item response value was used as the item score.

Statistical Analyses

Structural equation modeling (LISREL 8.5; Joreskog & Sorbom, 1996) was used to analyze the relationships among self-objectification, negative body regard, depressive

Table 1
Correlation Matrix, Means, and Standard Deviations of Variables in Model

	<i>Surv1</i>	<i>Surv2</i>	<i>Surv3</i>	<i>Shame</i>	<i>Att/Feel</i>	<i>Touch</i>	<i>Protect</i>	<i>Dep1</i>	<i>Dep2</i>	<i>Dep3</i>	<i>Drug</i>	<i>Sex</i>	<i>S-H1</i>	<i>S-H2</i>
<i>Surv1</i>	1.00													
<i>Surv2</i>	.490	1.00												
<i>Surv3</i>	.506	.498	1.00											
<i>Shame</i>	.471	.482	.433	1.00										
<i>Att/Feel</i>	-.468	-.500	-.507	-.677	1.00									
<i>Touch</i>	-.109	-.137	-.083	-.178	.270	1.00								
<i>Protect</i>	.001	.003	-.013	-.124	.174	.155	1.00							
<i>Dep1</i>	.316	.271	.260	.425	-.476	-.276	-.164	1.00						
<i>Dep2</i>	.309	.271	.255	.448	-.478	-.287	-.269	.714	1.00					
<i>Dep3</i>	.362	.336	.309	.537	-.580	-.314	-.220	.732	.857	1.00				
<i>Drug</i>	.074	.110	.047	.083	-.042	-.042	-.355	.055	.069	.071	1.00			
<i>Sex</i>	.035	.127	.092	.056	-.004	-.032	-.120	.046	-.002	.022	.414	1.00		
<i>S-H1</i>	.047	.038	.051	.152	-.176	-.209	-.181	.230	.274	.294	.069	.038	1.00	
<i>S-H2</i>	.075	.040	.106	.156	-.199	-.100	-.156	.207	.245	.262	-.025	.009	.682	1.00
<i>Means (Standard Deviations)</i>														
	5.71	5.17	5.11	3.89	4.48	5.08	5.32	2.96	2.67	2.49	1.44	2.05	1.41	1.17
	(.66)	(.99)	(.96)	(1.03)	(1.47)	(.95)	(.86)	(.66)	(.79)	(.75)	(.68)	(1.13)	(1.12)	(.55)

Note. Significant correlations ($p < .05$) are identified in bold. $N = 391$, *Surv1* = first surveillance subscale parcel, *Surv2* = second surveillance subscale parcel, *Surv3* = third surveillance subscale parcel, *Shame* = Body Shame subscale, *Att/Feel* = Attitude/Feeling toward the body subscale, *Touch* = Comfort with body touch subscale, *Protect* = Body protection subscale, *Dep1* = first depression composite score, *Dep2* = second depression composite score, *Dep3* = third depression composite score, *Drug* = Drug use, *SexRisk* = Sexual Risk Behavior, *S-H1* = self-harm item taken from the Body Investment Scale, *S-H2* = self-harm item taken from the National College Health Risk Behavior Survey.

symptoms, risk taking, and self-harm (see Figure 1). Analyses were conducted using the item covariance matrix (Table 1). Model parameters were estimated using the maximum likelihood method because it is robust to violations of multivariate normality and tends to provide reliable estimates under less than optimal data conditions (Hoyle, 1995; Kline, 1998). As recommended by Anderson and Gerbing (1988), we tested our model fit in a two-step approach, first confirming the measurement model and then testing the full structural model. The measurement model was evaluated through a confirmatory factor analysis of the measures used in the study. Subscale scores on each of the self-report measures were used as individual indicators and specified to load on their respective latent construct (e.g., depression, risk taking). The scale of each latent variable was set by fixing the path loading of the first indicator within each latent variable to 1.0. The latent constructs were allowed to correlate, as were the error terms between the measures of negative body regard.

Multiple fit statistics were used to evaluate the overall fit of the measurement and full structural models including

the chi-square statistic, Non-Normed Fit Index (NNFI), Normed Fit Index (NFI), Comparative Fit Index (CFI), Goodness of Fit Index (GFI), and the Root Mean Square Error of Approximation (RMSEA). Good model fit is indicated by a chi-square to *df* ratio less than 3 as well as values greater than .90 on the NFI, NNFI, CFI, and GFI. Additionally, a value less than .08 on the RMSEA suggests good model fit (Hu & Bentler, 1995; Kline, 1998).

RESULTS

The means, standard deviations, and correlations among the variables in the model are presented in Table 1. Results from the confirmatory analysis show that the measurement model was supported (see Table 2), and was appropriate for use in the analysis of the full structural model. In addition to hypothesizing that our model would fit the data, we hypothesized that negative body regard, depressive symptoms, and risk taking would act as mediators between self-objectification and self-harm within the model. The hypothesized model also specified a direct relationship between

Table 2
Fit Statistics for the Confirmatory Analysis and Structural Equation Models

<i>Model</i>	χ^2	<i>df</i>	χ^2/df	<i>RMSEA</i>	<i>GFI</i>	<i>NNFI</i>	<i>NFI</i>	<i>CFI</i>
CFA: Measurement								
Model of Variables	125.58	65	1.93	.048	.957	.962	.946	.973
Hypothesized Model	132.94	68	1.96	.049	.954	.961	.943	.971
Respecified Model	140.92	73	1.93	.049	.952	.962	.940	.970

negative body regard and self-harm as well as between depressive symptoms and self-harm. Results partially support our hypotheses.

The hypothesized model provided an overall good fit to the data (see Table 2). The fit indices suggest that the hypothesized model provided an adequate fit to the data. The parameter estimates specifying the paths between self-objectification and negative body regard, negative body regard and depression, and depression and self-harm were statistically significant ($p < .01$). However, there were no significant pathways associated with risk taking, and the paths from negative body regard to self-harm and from self-objectification to depression were also nonsignificant (see Figure 2). The nonsignificant paths within the model were dropped and analyses were rerun. The fit statistics of the respecified model were not significantly different from the original model, indicating that dropping the nonsignificant paths did not reduce the fit of the model. The respecified model provided a good fit to the data (see Table 2) and accounted for 12.3% of the total variance in self-harm.

As expected, self-objectification did not have a significant direct relationship with self-harm ($t = 1.11, p > .05$), but instead was related to self-harm indirectly through relationships with negative body regard and depression. Contrary to expectations, self-objectification did not have a significant direct effect on depression in this model. Mediation analyses revealed that the path from self-

objectification to depression (.49, $t = 7.43, p < .01$) became nonsignificant when negative body regard was included (.26, $t = 1.91, p > .05$), indicating that negative body regard fully mediated the relationship. Additionally, depression was found to fully mediate the relationship between negative body regard and self-harm. Without depression in the model, the path between negative body regard and self-harm was significant (.21, $t = 3.72, p < .01$). Once depression was added, the relationship became nonsignificant (.04, $t = .504, p > .05$), indicating that the relationship between negative body regard and self-harm was due to depression.

DISCUSSION

It was hypothesized that negative body regard, depressive symptoms, and risk-taking behavior would mediate the relationship between self-objectification and self-harm in women. Results partially supported the model, which indicated that objectification theory can offer some understanding of self-harm in women. We found that self-objectification had an indirect effect on self-harm that was accounted for by relationships with negative body regard and depressive symptoms. Self-objectification directly contributed to the development of negative body regard, which influenced depressive symptomology, which affected self-harm. The model explained a small but important amount

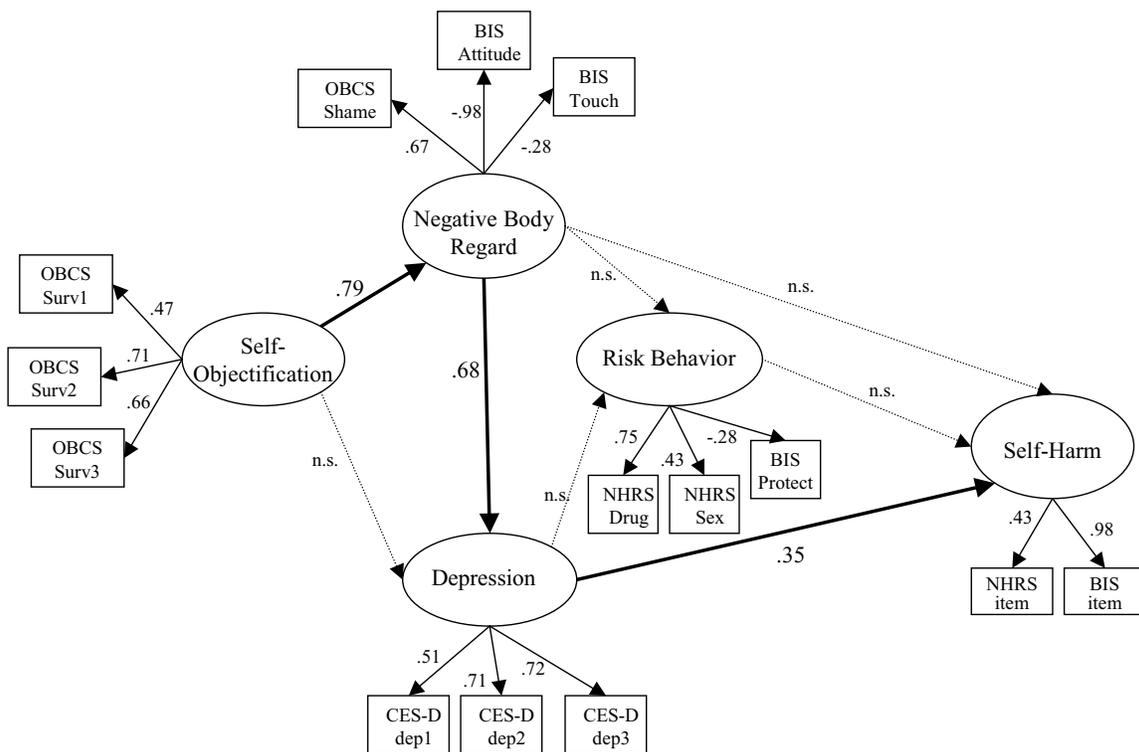


Fig. 2. Respecified model of self-objectification and self-harm with standardized parameter estimates. All parameter estimates are significant at the $p < .01$ level.

of the variance in self-harm and suggests that, although self-objectification does not lead to self-harm directly, the detrimental effects of negative body regard and depressive symptoms resulting from adopting an objectified view of the body do increase risk for self-harm. Therefore, self-objectification appears to play an important initiatory role in increasing risk for self-harm among women.

Contrary to our hypothesis, negative body regard did not directly increase risk for self-harm, but instead had an indirect effect through depressive symptoms. Our failure to find a direct link between negative body regard and self-harm would appear contradictory to the notion that having a dysfunctional or negative view of the body is necessary for self-harm to occur (Orbach, 1996; Walsh & Rosen, 1988). Our findings suggest that having negative body regard is necessary but not sufficient for self-harm. Negative body regard did have a direct effect on self-harm prior to the inclusion of depressive symptoms in the model, indicating that body regard is an important risk factor. The finding that depression fully mediated the effect of negative body regard on self-harm suggests that in addition to a negative view of the body, there must be some emotional distress present for self-harm to occur. This interpretation is supported by research documenting a significant relationship between depression and self-harm (e.g., Bennum & Phil, 1983), and is further supported by Shneidman's (1993) view that psychache, or mental pain, must be present for acts of self-harm to occur. Additionally, theories of self-harm suggest that individuals self-injure because it reduces and regulates their emotional pain (Favazza, 1996; Suyemoto, 1998), which is consistent with our findings. Therefore, it appears that the best interpretation of our results is that negative body regard alone is unlikely to lead to self-harm, but when emotional distress is present, negative body regard may enhance the likelihood that self-harm will occur. Consequently, it is the synergistic combination of negative body regard and emotional distress/mental pain that increases risk for self-harm. However, additional study of the role of body attitudes in self-harm is needed before strong conclusions can be made.

Risk-Taking Behavior

The hypothesis that self-objectification would contribute to risk-taking behaviors indirectly through negative body regard and depression was not supported, nor was the hypothesized relationship between risk taking and self-harm. Despite previous findings that risk-taking behaviors are associated with negative body regard and self-harm (e.g., Granner et al., 2002; Windle et al., 1992), risk-taking behavior was not significantly associated with any of the variables within the model. There are a number of potential explanations for our lack of findings, the most likely being the low base-rate of risk-taking behavior within our sample. It is likely there was not enough variance within our risk-taking variable for it to be affected by the other variables. Additionally, the low base-rate reduces the power of the

risk-taking variable to have an effect on self-harm. Thus, it is possible that the lack of associations with risk taking in our model is due to low power. Another potential explanation is that our sample consisted of women, and there is some research suggesting that relationships between risk taking, depression, and self-harm are stronger for men than for women (Allgower et al., 2001). In addition, our measurement of self-harm was limited to two general items, which limited our ability to detect the level or type of self-harm associated with risk taking. It is also conceivable that self-objectification, negative body regard, depressive symptoms, and self-harm bear no relationship to risk taking.

Including risk taking within the model was somewhat exploratory because there is little research documenting potential connections between the variables we used. Therefore, it could be that risk-taking behaviors are not influenced by negative body regard and depression and instead are influenced by other variables not included in our model. For now, it appears as though risk-taking behaviors do not increase risk for self-harm among women.

Self-Objectification, Body Regard, and Depression

Our finding that self-objectification contributed to negative body regard is consistent with objectification theory and previous research (e.g., Noll & Fredrickson, 1998), offering additional support for the postulate that self-objectification practices can decrease a woman's positive feelings toward her body. Contrary to earlier studies, self-objectification did not have a direct effect on depressive symptoms within our sample. Instead the relationship was fully mediated by negative body regard, reinforcing the notion that women's attitudes toward their body can have a strong impact on their mental health. This mediational effect is congruent with objectification theory and prior studies demonstrating that body dissatisfaction can lead to the development of depressive symptoms (e.g., Stice et al., 2000).

Objectification theory states that self-objectification can increase risk for depression because of the potential despair and body dissatisfaction that results from comparison of one's body to an unattainable ideal. Our results provide support for this tenet because we found that the relationship between self-objectification and depression is due to negative body regard. Our findings also indicate that self-objectification does not necessarily lead to depression. Women may objectify themselves but, according to our results, depression results only if the self-objectification contributes to negative regard for the body. Therefore, if a woman's self-objectification does not produce negative body evaluations, depression is less likely to occur. Prior studies citing a direct relationship between self-objectification and depression did not include measures of body regard as separate variables (see Miner-Rubino et al., 2002; Muehlenkamp & Saris-Baglama, 2002). Thus, it is likely their findings were confounded. By including negative body regard as a separate variable in our model, we

avoided the potential confound and provided a more accurate test of the relationship between self-objectification and depression. Our findings suggest that future studies should ensure that self-objectification and body regard be treated as separate entities.

Limitations and Summary

Although our results offer important information for understanding self-harm in women, there are a number of limitations that need to be considered. First, the level of pathology and base-rate of self-harm within our sample was low, and this may account for some of the nonsignificant paths within our model. However, the fact that we found significant relationships in our model, despite the low level of pathology in our sample, suggests that these effects are quite robust. Still, our use of a nonclinical sample may limit the generalizability of our findings to clinical populations. Future studies examining the effects of self-objectification, negative body regard, and depression on self-harm should be conducted with clinical samples.

Another potential limitation involves our measure of self-harm, which consisted of only two items. Having two items limits the range of information assessed. Additionally, the items were worded vaguely (e.g., "How often do you purposefully harm yourself?") and responses could reflect a range of self-harm from mild self-injurious behavior to suicide attempts. Given that self-injurious behavior and suicide attempts are known to be distinct behaviors (Favazza, 1996; Walsh & Rosen, 1988), future studies should test the supported model within separate samples of self-injurers and suicide attempters. Another drawback to this study was that the sample was limited primarily to European American, college-age women. Future studies should examine the effect of self-objectification on the variables in our model within ethnically diverse, adolescent, and clinical samples of women. Moreover, because body image is closely tied to overall self-esteem, future studies should look at the possible mediating role of self-esteem in our model. In addition, the role of objectified body consciousness, body perceptions, and self-harm should be assessed in men.

To summarize, our model of self-harm based within objectification theory was partially supported. Results indicate that self-objectification contributes to risk for self-harm through its effect on negative body regard, which increases depressive symptoms, and in turn, self-harm. Our findings support the notion that having a negative or dysfunctional view of the body is an important factor in self-harm, but that the presence of emotional distress is necessary for self-harm. These results expand the applicability of objectification theory to self-harm, another mental health problem area, and testify to the flexibility of the theory's generalizability to a variety of women's experiences.

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