Downward spirals of body surveillance and weight/shape concern among African American and Caucasian college women

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A R T I C L E   I N F O

Article history:
Received 27 October 2010
Received in revised form 12 April 2011
Accepted 12 April 2011

Keywords:
Objectified body consciousness
Self-objectification
Body surveillance
Weight/shape concern
Race/ethnicity
Body image

A B S T R A C T

Within dominant American culture, females often learn to view themselves from an observer’s perspective and to treat themselves as objects to be looked at (i.e., self-objectification), which can result in negative outcomes. Body surveillance (the indicator of self-objectification) has been found to predict concern with weight/shape in predominantly Caucasian samples, but research has not yet examined the potential reciprocal relations between body surveillance and weight/shape concern. Participants were 226 women attending a Midwestern university (70 self-identified as African American and 156 as Caucasian) who provided data at two time points, spaced about 5 months apart. Results revealed that downward spirals of body surveillance and weight/shape concern were apparent for the Caucasian but not the African American women. However, there was evidence that body surveillance helped account for change in weight/shape concern for the African American women.

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Introduction

Objectification theory, as construed by Fredrickson and Roberts (1997), suggests that females are acculturated to internalize the objectifying observer’s perspective of their bodies. This self-objectification often occurs as a result of sexual objectification, the experience of being treated solely as a body that exists for the use and pleasure of others (Fredrickson & Roberts, 1997). It is not uncommon for a woman to feel sexually objectified (often by men), as her “sexual parts or functions are separated out from her person, reduced to status of mere instruments, or else regarded as if they were capable of representing her” (Bartky, 1990, p. 35). Such sexualization may occur in many forms, such as via sexual violence or through gaze (i.e., visual inspection of the body; Fredrickson & Roberts, 1997), and as previously suggested, may then “coax” females into adopting a view of themselves as objects (Fredrickson & Roberts, 1997, p. 177).

Further, given that Western culture positions appearance, particularly a thin figure, as central to a woman’s value as a person (Rodin, Silberstein, & Striegel-Moore, 1984; Spitzack, 1990; Stice, 1994), many women feel they must engage in constant body surveillance in order to ensure their compliance with cultural standards of thinness (i.e., the thin ideal; Gilbert & Thompson, 1996; McKinley, 2004; Thompson & Stice, 2001). Indeed, research has indicated that body surveillance is the behavioral manifestation of self-objectification; that is, if a woman has internalized the observer’s perspective of her own body, she will engage in persistent body surveillance or monitoring (e.g., Moradi, 2010, 2011). It is via this self-surveillance that many women realize there is a discrepancy between what they see and what they feel they ought to look like, and thus, may experience shame (i.e., not simply negative feelings regarding the body, but about the self) and weight/shape concern (i.e., includes dissatisfaction with the body and such things as overvaluation of and preoccupation with weight/shape; McKinley & Hyde, 1996; Ross & Wade, 2004). Little is known, however, in terms of the potential reciprocal relations between body surveillance and weight/shape concern (i.e., body surveillance increasing weight/shape concern and weight/shape concern increasing body surveillance) and in terms of how these factors relate to each other in ethnic minority groups, which may have different cultural expectations for women’s bodies. This study seeks to test such reciprocal relations in African American and Caucasian college women.

Existing research suggests that African American women may experience lower levels of trait self-objectification than Caucasian women (Hebl, King, & Lin, 2004). Specifically, African American women generally report lower levels of the manifestation of self-objectification, body surveillance (Breitkopf, Littleton, & Berenson, 2007; Moradi & Huang, 2008); however, some studies suggest a more complex picture. For example, Harrison and Fredrickson (2003) found that Caucasian adolescents’ state self-objectification increased after exposure to lean female athletes.
concern group. Caucassian & Simons, DeLeel, this American racial/ethnic Grilo, cultural self-objectification are monitoring Hesse-Biber, significantly, culturally. Thus, with these weight/shape resolve thinness body dis-satisfaction with body between those weight/shape with those weight/shape with their bodies, the consequences of such dissatisfaction and concern are likely not as far-reaching as they may be for Caucasian women. Specifically, Breitbart et al. (2007) and Parker, Nichter, Nichter, Vuckovic, Sims, and Ritenbaugh (1995) hypothesize that because African American women are more likely to define attractiveness in a multifaceted way (e.g., including such things as style and personality), they likely spend less time worrying about what others think about their physical appearance. If attractiveness is defined in a comprehensive manner (rather than largely dependent on body size, shape, and weight), it seems as though constant surveillance of the body would be less necessary and not as practical/function-al of a consequence of weight/shape concern as it might be for Caucasian women, who are likely hoping to find and reduce any discrepancies that exist between their own bodies and the thin ideal.

The hypothesized reciprocal relations between body surveil-lance and weight/shape concern underlie our hypothesis that body surveillance and weight/shape concern interact in a downward spiral-type fashion. Specifically, it is believed that the effects of both body surveillance and weight/shape concern should accumulate and reciprocally spur each other as consequences. This concept has been applied to reciprocal relations before, but with a focus on upward spirals whereby positive affect and positive coping were found to mutually build on each other (Burns et al., 2008). Since the work by Burns and colleagues focused on emotional well-being, the choice of the descriptor “upward” spirals is apt; however, since our focus is on less healthy attitudes/behaviors, we have chosen to describe the nature of the relations as “downward” spirals. It is expected that the act of body surveillance will increase an individual’s weight/shape concern, and that in turn, weight/shape concern should predict future increases in body surveillance.

In the present study, we tested hypotheses related to downward spirals by examining body surveillance and weight/shape concern at two time points. Specifically, our first hypothesis was that initial weight/shape concern would predict subsequent weight/shape concern, at least in part through ongoing experiences of body surveillance. Similarly, our second hypothesis was that initial body surveillance would predict subsequent body surveillance, in part through ongoing experiences of weight/shape concern. Based on prior research, it was expected that the hypothesized relations would hold for Caucasian college women, but because of the limited data related to African American college women and these constructs, no specific hypotheses were generated for this group. Support for these hypotheses would confirm the reciprocal relation between these two constructs and the idea that body surveillance and weight/shape concern serially influence one another in a downward spiral-type fashion.

Method

Participants

Participants at Time 1 (T1) were 276 women attending a Midwestern university; 97 (35%) described themselves as African American/Black, and 179 as Caucasian non-Hispanic/White. At Time 2 (T2), 70 African American women and 156 Caucasian women provided data; all analyses and statistics reported refer to this
sample. For African American participants (i.e., those providing data at both time points), the mean age was 19.11 years (SD = 1.75); for Caucasian participants, the mean age was 18.53 years (SD = 0.83). For African American participants, mean body mass index (BMI) was 24.01 kg/m² (SD = 4.31); for Caucasian participants, mean BMI was 22.31 kg/m² (SD = 2.83). Highest parental education was used as a proxy for socioeconomic status. On average, the highest education attained by parents of the African American women was 16.00 years (SD = 2.94), and for Caucasian women, the mean was 16.38 years (SD = 2.54). Of note, age, \( t(83) = -2.65, p = 0.01 \), and BMI, \( t(97) = -3.03, p = 0.003 \), were significantly different across the groups, while highest parental education was not, \( t(224) = 1.00, p = 0.318 \). We ran analyses both controlling for and without controlling for BMI and age (given that these variables differed significantly across the groups), with similar patterns of significance emerging whether or not these covariates were included. As such, results without either covariate are presented for the sake of parsimony, with the one analysis where the pattern of significance changed (from marginally significant to significant) noted in the Results.

Procedures

This study was reviewed and approved by the university’s Institutional Review Board. At two time points, separated by about 5 months, participants completed the same set of questionnaires as part of a study presented to them as a longitudinal investigation of personality and eating patterns. Only African American and Caucasian women were invited to participate. Efforts were made to oversample African American women, given research interests in this population, and recruitment occurred both through introductory psychology courses and through campus-wide recruitment strategies (e.g., flyers, email distribution lists that targeted racially/ethnically diverse students). The time points were separated by 5 months for pragmatic reasons, so that both T1 data collection (which occurred in the fall semester) and T2 data collection (which occurred in the spring semester) could occur in an academic year, so as to achieve a good retention rate. Because data collection occurred within a single academic year, contacting participants for T2 participation simply involved contacting them via the email addresses and phone numbers they provided at T1. Of note, other research has used time periods of less than 1 year in predicting change in aspects of weight/shape concern among adolescent and undergraduate females (e.g., Presnell, Bearman, & Stice, 2004 – 9 months; Striegel-Moore, Silberstein, Frensch, & Rodin, 1989 – 8 months).

Questionnaires were presented in a fixed, random order and were administered to groups of participants (typically from 5 to 25 per group) after obtaining written consent. Questionnaire completion took 45 min to 1 h, and participants received course credit or remuneration (e.g., $10 gift certificate to a local shopping mall) for their involvement. Of the T1 participants, significantly more Caucasian women (156 of 179; 87.2%) than African American women (70 of 97; 72.2%) completed T2, \( \chi^2(1, 276) = 9.52, p = .002 \). Completers were compared to noncompleters both in the full sample and within racial group using t-tests; these groups were not significantly different from each other on body surveillance or weight/shape concern at T1. Thus, the completers appear to be representative of the participants who began the study on the study variables, minimizing attrition concerns.

Measures

Demographics. Demographic data for age, parents’ highest levels of education attained, and race/ethnicity were collected via a set of questions created for this study.

Body surveillance. Body surveillance was measured at both time points with the Body Surveillance subscale of the Objectified Body Consciousness Scale (OBCS; McKinley & Hyde, 1996). This subscale consists of eight items that are rated on an 7-point range from 1 (strongly disagree) to 7 (strongly agree) and averaged to create a subscale score, with higher scores indicating higher levels of surveillance or habitual body monitoring and thinking of one’s body in terms of how it looks rather than how one feels. Construct validity is demonstrated by high correlations with public self-consciousness (\( r = .73 \)) and nonsignificant relations with private self-consciousness (McKinley & Hyde, 1996). McKinley and Hyde (1996) reported a coefficient alpha of .89 in a sample of student and nonstudent women, and in the current study, alpha was .74/.79 for African American women and .89/.88 for Caucasian women at T1 and T2, respectively. No known formal test of this subscale’s psychometric properties has been conducted using an African American sample; however, research has indicated that this subscale exhibited adequate internal consistency (alpha of .70) and moderate positive correlations with self-objectification and body shame for African American women (similar correlational patterns have been observed for Caucasian women; Buchanan et al., 2008).

Weight/shape concern. Weight/shape concern was assessed at both time points via the 12 items that comprise the Weight Concern and Shape Concern subscales of the Eating Disorder Examination-Questionnaire (EDE-Q; Fairburn & Beglin, 1994), a measure that was derived from the Eating Disorder Examination (EDE) interview (Fairburn & Cooper, 1993). These items are rated on a 7-point scale ranging from 0 to 6, with items either rated on a no days to everyday or not at all to markedly scale; items were averaged to create a subscale score. The EDE-Q assesses disordered eating psychopathology over the past four weeks, and these two subscales focus on weight and shape dissatisfaction and the degree to which one’s self-worth and acceptance of oneself are defined by weight or shape (Ross & Wade, 2004). Weight/shape concern was operationalized by combining the Weight Concern and Shape Concern subscales so as to capture multiple dimensions of the construct of body dissatisfaction, and because previous work has indicated that these two subscales generally load onto one underlying factor (Peterson et al., 2007). The EDE-Q is one of the most commonly used measures of disordered eating attitudes and behaviors in clinical and community populations (Anderson & Williamson, 2002) and its subscales demonstrate internal consistency (alphas of .78–.93; Luce & Crowther, 1999) and convergent validity (Fairburn & Beglin, 1994; Grilo, Masheb, & Wilson, 2001) among samples of college women and community and patient groups. Bardone-Cone and Boyd (2007) reported internal consistency (.83–.91) and 5-month temporal stability (.80–.81) of the EDE-Q Weight Concern and Shape Concern subscales across samples of both African American and Caucasian college women. Further, in the current sample, these subscales show similar correlations with bulimic symptomatology and dietary restraint for both African American and Caucasian women. In this sample, alpha was .91/91 for African American women and .94/94 for Caucasian women at T1 and T2, respectively.

BMI. Participants reported on their current weight and height at T1, and we used this information to compute BMI by dividing weight in kilograms by height in meters squared. This index controls for weight variations due to height, yielding a measure of relative weight. There is evidence that individuals are generally accurate with their self-reported weights (Shapiro & Anderson, 2003).
Analytic Strategy

In this study, we used a similar analytic approach (i.e., mediation models) to that utilized by Burns et al. (2008) in their examination of upward spirals of positive emotion and broad-minded coping. For example, for our first hypothesis, examining whether initial weight/shape concern predicted subsequent weight/shape concern through ongoing experiences of body surveillance: T1 weight/shape concern was entered as the independent variable, averaged T1–T2 body surveillance was the mediator, and T2 weight/shape concern was the dependent variable. That is, we estimated the path in the regression of the mediator (i.e., averaged T1–T2 body surveillance) onto T1 weight/shape concern (i.e., the a path) and the path in the regression of T2 weight/shape concern onto averaged T1–T2 body surveillance controlling for T1 levels of weight/shape concern (i.e., the b path). The ab product term (i.e., point estimate) then provides an estimate of the meditational effect of T1 weight/shape concern on T2 weight/shape concern through average body surveillance; the significance test of this point estimate determines whether this value is significantly different from zero. We then examined whether such point estimates differed across the groups by subtracting them and testing whether the difference estimate was significantly different from zero. As in Burns et al. (2008), because we were interested in whether ongoing experiences of body surveillance account for changes over time in weight/shape concern, we examined whether the relation between T1 and T2 weight/shape concern was mediated by the T1–T2 mean of body surveillance (rather than the T1 version of this variable).

As suggested by Burns et al. (2008), an alternative approach would be to use the T1 version of the mediator (as opposed to the averaged T1–T2 version) to predict changes from T1 to T2 in the dependent variable. Results using this approach were generally consistent but much less strong than those using the averaged T1–T2 mediator. As purported by Burns et al. (2008), we believe this is to be expected given that the T1 version of the mediator captures processes that occur at T1 and before, while the averaged T1–T2 mediator captures processing occurring between T1 and T2 (which we are more interested in). Because we were interested in ongoing experiences of the mediator, the averaged T1–T2 variable was most appropriate.

Mplus Version 5.21 (Muthén & Muthén, 2007) was used to run these analyses. Further, because the assumption of normality of the sampling distribution of these indirect effects was questionable given our small sample sizes (i.e., this sampling distribution is normal only in very large samples, and in general, indirect effects are rarely normal), we used the bootstrapping method, which is recommended when assumptions may not be met (Preacher & Hayes, 2008). Bootstrapping (using 5000 resamples) was used to obtain estimates of the indirect effects and to test their significance via confidence intervals. Additionally, multiple group modeling was utilized to examine whether the hypothesized models fit differentially for African American and Caucasian college women.

Results

Descriptive Statistics

Table 1 displays means for and correlations between the study variables for both groups. Results indicated that Caucasian women experienced similar levels of T1 body surveillance as the African American women, t(224) = 0.98, p = .329. As expected, they differed in T1 weight/shape concern, t(224) = 3.33, p = .001. When examining these constructs at T2, there were group differences both in weight/shape concern, t(224) = 2.55, p = .011, and in body surveillance, t(224) = 2.50, p = .013. Furthermore, repeated measures analyses of variance (ANOVs) indicated that mean body surveillance significantly differed from T1 to T2 for the African American women, F(1, 69) = 4.96, p = .029, but not for the Caucasian women, F(1, 155) = 0.59, p = .443. Mean weight/shape concern did not significantly differ from T1 to T2 for either group (African American women: F(1, 69) = 0.03, p = .861; Caucasian women: F(1, 155) = 3.18, p = .076). For both groups, the T1 correlations between body surveillance and weight/shape concern were strong (Caucasian women: r = .66, p < .001; African American women: r = .53, p < .001), with a Fisher r-to-z transformation indicating that this concurrent relation was equally strong across the groups, z = 1.32, p = .187.

Do Body Surveillance and Weight/Shape Concern Reciprocally Influence One Another?

Our first hypothesis was that T1 weight/shape concern would predict T2 weight/shape concern, at least partly as a function of predicting intermediary levels of body surveillance, and similarly, our second hypothesis was that T1 body surveillance would predict T2 body surveillance, partly as a function of predicting intermediary levels of weight/shape concern. It was predicted that these mediation models would hold for Caucasian women; the tests of these models in African American women were exploratory.

In terms of the first hypothesis, results indicated that averaged body surveillance significantly partially mediated the relation between T1 weight/shape concern and T2 weight/shape concern for both the Caucasian and African American women (see Table 2). The model and standardized path estimates are shown in Fig. 1. Of note, because the model was just identified (fully saturated), there were zero degrees of freedom and a perfect fit; thus, meaningful fit indices could not be calculated. The indirect effect of T1 weight/shape concern on T2 weight/shape concern through averaged body surveillance was marginally significantly greater among the Caucasian women (see Table 2), although the group difference became significant (point estimate = 0.134, SE = 0.062, p = .029, bootstrapping 95% confidence interval = 0.015–0.259) when controlling for BMI. We note that the remaining direct effect from T1 weight/shape concern to T2 weight/shape concern was quite strong for both groups; this is not surprising given that one would expect a fair amount of temporal stability in this construct.

In terms of the second hypothesis, results indicated that averaged weight/shape concern significantly partially mediated the relation between T1 body surveillance and T2 body surveillance for the Caucasian women but not for the African American women (see Table 2). Further, results indicated that the size of this indirect effect was significantly different across groups (with the effect being larger for the Caucasian women). The model and standardized path estimates are shown in Fig. 2. Again, because the model was just identified (fully saturated), there were zero degrees of freedom and a perfect fit. We again note that the strength of the remaining direct effect from T1 body surveillance to T2 body surveillance was quite strong for both groups; again, this was not surprising given that one would expect this construct to be at least somewhat stable over time.

Taken together, these findings indicate that for the Caucasian women, body surveillance predicts itself partly through weight/shape concern and that weight/shape concern predicts itself partly through body surveillance. Thus, these two constructs appear to reciprocally influence one another in college women of this racial/ethnic group. In the case of the African American college women, the same downward spirals are not apparent; weight/shape concern predicts itself partly through body surveillance but body surveillance does not appear to predict itself through weight/shape concern.
Table 1  
Correlations among and means and standard deviations of the measured variables for both the Caucasian and African American women. 

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Body surveillance T1</td>
<td>-</td>
<td>.78***</td>
<td>.53***</td>
<td>.53***</td>
<td>.33***</td>
</tr>
<tr>
<td>2. Body surveillance T2</td>
<td>.72***</td>
<td>-</td>
<td>.42***</td>
<td>.53***</td>
<td>.36***</td>
</tr>
<tr>
<td>3. Weight/shape concern T1</td>
<td>.66***</td>
<td>.58***</td>
<td>-</td>
<td>.84***</td>
<td>.56***</td>
</tr>
<tr>
<td>4. Weight/shape concern T2</td>
<td>.60***</td>
<td>.67***</td>
<td>.82***</td>
<td>-</td>
<td>.60***</td>
</tr>
<tr>
<td>5. BMI T1</td>
<td>.04</td>
<td>.02</td>
<td>.23***</td>
<td>.28***</td>
<td>-</td>
</tr>
</tbody>
</table>

Note: C = Caucasians. AA = African Americans. Variables are continuous, with higher values reflecting higher levels of the construct. Correlations for the African American women are above the diagonal, and correlations for the Caucasian women are below the diagonal.

***p < .01.
**p < .05.

Table 2  
Mediation of the effect of T1 weight/shape concern on T2 weight/shape concern through averaged body surveillance (Model 1) and of T1 body surveillance on T2 body surveillance through averaged weight/shape concern (Model 2).

<table>
<thead>
<tr>
<th>Variables</th>
<th>Point estimate</th>
<th>SE</th>
<th>p</th>
<th>Bootstrapping percentile 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1: based on Hypothesis 1</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Indirect effects</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C: ab (through averaged body surveillance)</td>
<td>0.190</td>
<td>0.048</td>
<td>.000</td>
<td>0.099</td>
</tr>
<tr>
<td>AA: ab (through averaged body surveillance)</td>
<td>0.088</td>
<td>0.035</td>
<td>.013</td>
<td>0.030</td>
</tr>
<tr>
<td>Contrasts</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>ab (through averaged body surveillance): C v. AA</td>
<td>0.102</td>
<td>0.060</td>
<td>.089</td>
<td>-0.018</td>
</tr>
<tr>
<td>Model 2: based on Hypothesis 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indirect effects</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C: ab (through averaged weight/shape concern)</td>
<td>0.210</td>
<td>0.046</td>
<td>.000</td>
<td>0.127</td>
</tr>
<tr>
<td>AA: ab (through averaged weight/shape concern)</td>
<td>0.057</td>
<td>0.057</td>
<td>.322</td>
<td>-0.048</td>
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<tr>
<td>Contrasts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ab (through averaged weight/shape concern): C v. AA</td>
<td>0.153</td>
<td>0.074</td>
<td>.038</td>
<td>0.005</td>
</tr>
</tbody>
</table>

Note: C = Caucasians. AA = African Americans. CI = confidence interval. Model 1 (based on Hypothesis 1) involves averaged body surveillance as a mediator of the relation between T1 weight/shape concern and T2 weight/shape concern. Model 2 (based on Hypothesis 2) involves averaged weight/shape concern as a mediator of the relation between T1 body surveillance and T2 body surveillance. Parameters based on 5000 bootstrap samples.

Discussion  

The present study sought to examine the potential reciprocal relations between body surveillance and weight/shape concern in African American and Caucasian college women. Results indicated that downward spirals of body surveillance and weight/shape concern were apparent for the Caucasian but not African American women. These findings lend support to the notion that for African American women, these constructs may not necessarily go hand-in-hand; however, there was evidence that body surveillance helped account for change in weight/shape concern for this group.

Why do body surveillance and weight/shape concern not reciprocally influence each other in this sample of African American women? Specifically, why was there no support found for initial body surveillance spurring subsequent body surveillance via weight/shape concern? This suggests that for African American college women, inspecting their bodies is not maintained or increased because of resultant weight/shape concern. Instead, when these women survey their bodies, they may be less negatively affected by what they see given that African American women typically define attractiveness in a more comprehensive and multifaceted way than Caucasian women (Breitkopf et al., 2007). In contrast to Caucasian women who rely heavily on thinness in their definitions.

Fig. 1. Model 1 (based on Hypothesis 1). C = Caucasians. AA = African Americans. Path coefficients are standardized. ***p < .001. **p < .01. *Path coefficients that differ significantly across the groups at the p < .05 level.
of attractiveness (Hesse-Biber, 1996), African American women tend to make "what [they've] got work for [them]" (Parker et al., 1995, p. 108) and to have a broad and flexible definition of beauty. Thus, to the extent that body surveillance lets them identify what they have to "work" with, while it may generate further surveillance, this is less likely due to weight/shape concern.

Results did indicate that body surveillance helped explain the relation between initial and subsequent weight/shape concern for African American college women though, suggesting that once an African American woman is dissatisfied/concerned with her body and turns to body surveillance, then mismatches identified between herself and ideals may generate more dissatisfaction/concern. This indirect effect was apparent for the Caucasian women as well. This relation may be operating for both groups because once a woman is concerned with her body (i.e., has a negative body schema), the results of subsequent body surveillance are likely to confirm the individual’s negative outlook on her body and prompt further weight/shape concern. Indeed, research has indicated that once a negative body schema has been formed, it serves to maintain body image disturbance since the schema determines what the individual notices, attends to, and remembers about experiences with their bodies (Padesky, 1994). Even if body surveillance were to result in the individual finding some aspects of her body that contradict her negative body schema, individuals who are already concerned with their weight/shape will likely not notice, distort, or discount such contradictory evidence (Kearney-Cooke & Striegel-Moore, 1997).

Overall, given African American women's multifaceted definitions of attractiveness and more flexible standards of beauty, it makes conceptual sense that body surveillance and weight/shape concern would not necessarily reciprocally influence one other for this group; this supposition was confirmed by the results of the current study. In contrast, downward spirals of body surveillance and weight/shape concern were apparent for the Caucasian women in this study, as evidence of partial mediation suggests that these constructs may help account for increasing levels of one another over time. These results provide support for the inter-related nature of body surveillance and weight/shape concern for this group. Previous research has indicated that among Caucasian samples, body surveillance may predict weight/shape concern (e.g., Knauss et al., 2008; Muehlenkamp et al., 2005). To our knowledge, this is the first study to show that weight/shape concern may lead to increased levels of body surveillance as well, and that these constructs have a reciprocal influence upon one another. Thus, it seems that Caucasian individuals who fall into such downward spirals of body surveillance/weight/shape concern, but may also set themselves on a trajectory to keep experiencing such body surveillance/weight/shape concern.

The current study has several strengths, including the novel focus on the potential reciprocal relations (i.e., downward spirals) between body surveillance and weight/shape concern. Another strength of the study is the focus on the consequences of body surveillance/self-objectification for African American women. As aforementioned, this is one of only a handful of studies to examine these constructs among this group. Also, our analytic strategy was novel (modeled from Burns et al., 2008) and provided us with a way to examine potential downward spirals between the study constructs utilizing two waves of data.

Some limitations of the present study include the relatively small sample size, the fixed order of questionnaire presentation (which may have resulted in more participant fatigue during later questionnaires), the relatively short follow-up period, and generalizability. We note that the small sample size (particularly of African American women) may have made it difficult to detect significant path coefficients and indirect effects that were small. Fritz and MacKinnon (2007) found that in order to detect path coefficients of medium size (i.e., values of .39), a sample size of at least 71 is needed in order to achieve .8 power when using bias-corrected bootstrap methodology (i.e., the approach utilized in the current study). However, in order to detect path coefficients that are smaller (i.e., set to values of .26), Fritz and MacKinnon (2007) found that at least 148 individuals would be needed to achieve the same level of power. Generalizing from these results, the current sample size was likely sufficient to detect path coefficients and indirect effects of medium size; however, for the African American women, it may have been difficult to detect real effects that were small in magnitude. Yet, the only path coefficient that was not significant for the African American women was of a magnitude of .10, which would potentially not be significant even with a much larger sample size. Although the use of a college sample may be appropriate, especially given the high prevalence of weight/shape concern among this group (e.g., Silberstein, Striegel-Moore, Timko, & Rodin, 1988), the generalizability of these findings to other groups that differ in developmental stage (e.g., adolescents, middle-age women), socio-economic status, etc. is unclear.

Future research should examine whether certain factors moderate whether these reciprocal relations occur. For instance, perfectionism may serve as a moderator, whereby highly perfectionistic individuals (whose striving for the “perfect” body will be unattainable; Striegel-Moore, McAvay, & Rodin, 1986) may be more susceptible to downward spirals of body surveillance and weight/shape concern than those low in perfectionism. Related specifically to African American women, moderators such as degree of identification with African American culture and acculturation may indicate that a subsample is vulnerable to downward spirals of body surveillance and weight/shape concern, or indicate for whom body surveillance affecting change in weight/shape concern is most likely; looked at differently, these potential moderators may indicate who is protected (e.g., women who identify strongly with African American culture). Indeed, level of acculturation may play...
a large role in determining how an African American woman feels about and responds to her body (Beech et al., 2004; Henrickson, Crowther, & Harrington, 2010; Hesse-Biber et al., 2010). It will also be important to determine whether other protective factors exist, such as self-efficacy, low-thin-ideal internalization or holding a broad definition of beauty (Wood-Barcalow, Tylka, & Augustus-Hovarth, 2010), which may prevent or disrupt downward spirals. Gapinski, Brownell, and LaFrance (2003) found that women who were high on self-objectification generally tended to be less likely to feel self-efficacious, capable, and purposeful, suggesting that fostering self-efficacy may disrupt negative effects of body surveillance. Different sampling strategies are also recommended, in particular, examining these relations among women at historically Black colleges, since African American participants in the current study were students at a predominantly Caucasian university (about 84% Caucasian and 6% African American) and because group norms and sociocultural factors play an important role in defining beauty and attractiveness. In the future, research should also assess other factors that may be relevant in terms of African American women’s body image (e.g., skin tone, hair texture; Buchanan et al., 2008); it would be interesting to investigate whether including such factors in body dissatisfaction definitions (rather than focusing solely on weight and shape concerns) sheds additional light on the possibility of downward spirals between body surveillance and aspects of body dissatisfaction for this group. Lastly, future research may wish to examine other self-objectification-related constructs that might work together in a downward spiral-type fashion, such as body shame and internalization of the thin ideal.

As evidenced by the results of this study, at least for Caucasian women, it seems that body surveillance accounts for increases in weight/shape concern and that weight/shape concern accounts for increases in body surveillance. This has significant clinical implications. For example, clinicians would be wise to teach women strategies for buffering the deleterious effects of body surveillance and weight/shape concern (e.g., coping skills) or ways of “uncoupling” body surveillance and weight/shape concern, for example, by defining attractiveness in a more comprehensive manner. Specifically, even if a woman engages in body surveillance, it is unlikely that such surveillance would lead to significant feelings of weight/shape concern if she holds a broad and flexible definition of attractiveness that incorporates more than just physical appearance. In the case of African American women (for whom reciprocal relations between body surveillance and weight/shape concern do not seem to exist), already-existing protective factors, such as a more flexible and multi-faceted definition of beauty, should be bolstered.

In conclusion, the results reported here provide prospective evidence that at least for Caucasian women, body surveillance and weight/shape concern may have effects beyond those that occur in the present moment. That is, experiences of body surveillance not only lead to increased weight/shape concern for this group, but weight/shape concern also predicts increased levels of body surveillance. In contrast, the same downward spirals were not apparent for the African American women, although there was evidence that body surveillance helped account for change in their weight/shape concern.

References


