

LOYOLA UNIVERSITY CHICAGO

SELF-OBJECTIFICATION AND SELF-SURVEILLANCE IN AFRICAN-AMERICAN
AND LATINA GIRLS: LINKS TO BODY DISSATISFACTION AND SELF-WORTH

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ABSTRACT

Drawing on a sample of low-income African American and Latina girls, the goal of the present investigation was to examine the relevance of self-objectification and self-surveillance to body dissatisfaction and self-worth. Body mass index (BMI), ethnicity, and perceived athletic competence were examined as moderators of these relations. Participants were 10- to 14-year-old African American and Latina girls recruited from a summer camp targeting low-income, urban girls. Surveys that include measures of self-objectification, self-surveillance, body dissatisfaction, self-worth, and perceived athletic competence were individually administered to participants by a research assistant. Height and weight were measured to calculate BMI. Ethnicity information was obtained from surveys completed by parents. Results indicated that self-objectification and self-surveillance were related, and older girls reported higher levels of each. No main effects of self-objectification were found, however, higher levels of self-surveillance were associated with lower self-worth. Among African American girls with higher BMI, self-objectification was associated with less body dissatisfaction. Among Latina girls with higher perceived athletic competence, higher self-objectification was associated with lower self-worth. Findings indicate that self-objectification and self-surveillance are indeed experienced by low-income, ethnic minority girls and increase across the transition to adolescence. Self-surveillance may be particularly important to address in interventions targeting self-worth of ethnic minority girls. Finally, results suggest the

importance of ethnicity, BMI, and perceived athletic competence in understanding how self-objectification and self-surveillance relate to well-being among ethnic minority girls.

CHAPTER ONE

INTRODUCTION

Most adolescent girls experience body dissatisfaction and low self-worth at some point during their adolescent years (e.g., Adams, Kuhn, & Rhodes, 2006; Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). Body dissatisfaction and low self-worth have immediate and long-term consequences for psychological well-being and physical health (Stice, 2002; Trzesniewski et al., 2006). Researchers have primarily attributed adolescent girls' risk for these experiences to the stressors of school transitions and the ways in which puberty may cause their bodies to deviate more from the societal thin ideal (e.g., McCarthy, 1990; Seidman, Allen, Aber, Mitchell, & Feinman, 1994). Recent research has identified two factors, however, that may be particularly relevant to body dissatisfaction and self-worth: *self-objectification* and *self-surveillance*. Although the relevance of these factors has been well-documented in women (see Mercurio & Landry, 2008; Myers & Crowther, 2007), they have been largely overlooked among adolescent girls, especially ethnic minority girls. The influence of these two factors may be particularly important to examine during early adolescence given the considerable bodily changes that accompany puberty.

To better understand links between self-objectification, self-surveillance, body dissatisfaction, and self-worth, it is also important to consider the role of various protective factors. Prior research suggests that lower body mass index (BMI) may serve

as a protective factor when considering body dissatisfaction and self-worth. A study of ethnically-diverse adults found that the association between self-surveillance and body dissatisfaction was weaker among women with a healthy body weight compared to those who were overweight or obese (Frederick, Forbes, Grigorian, & Jarcho, 2007). Ethnicity may also be a protective factor, as African American girls appear to be somewhat protected from the development of body dissatisfaction and decreased self-worth often experienced by adolescent girls of other ethnicities (see Rhodes, Roffman, Reddy, & Fredriksen, 2004; Vanderwal & Thomas, 2004). Another important protective factor that has received relatively less attention is perceived athletic competence. There is reason to believe that girls who feel confident in their athletic skills may be less susceptible to body concerns and low self-worth (Davison, Werder, Trost, Baker, & Birch, 2007; Karr, Davidson, Bryant, Balague, & Bohnert, 2012). Drawing on a sample of low-income, African American and Latina girls, the goal of the present investigation is to examine the relevance of self-objectification and self-surveillance to body dissatisfaction and self-worth (see Figures 1 & 2). BMI, ethnicity, and perceived athletic competence will be examined as moderators of these relations.

Self-Objectification and Adolescent Girls

Self-objectification refers to viewing and valuing oneself as a sexual object (Calogero, Tantleff-Dunn, & Thompson, 2011). In Western cultures, women and girls are so often treated as bodies or sexual objects to be evaluated and used by others, rather than as individuals capable of independent thought, desires, and actions, that

sexualization of females can be considered a social norm (Smolak & Murnen, 2010; Thompson et al., 1999). Objectification theory (Fredrickson & Roberts, 1997) argues that the accumulation of such day-to-day sexually objectifying experiences leads some girls and women to internalize this objectifying lens and perceive *themselves* as objects to be evaluated and used by others (e.g., self-objectify). Self-objectification is theorized to develop at the onset of adolescence, when girls' bodies begin to manifest visible signs of puberty and they become frequent targets of sexual objectification from peers, family members, and media (American Association of University Women Foundation, 2001; Fredrickson & Roberts, 1997).

Self-objectification is associated with a host of negative experiences for girls, including eating disorder symptoms, depression, diminished cognitive functioning, impaired physical performance, and fewer flow experiences (Calogero, Thompson, & Davis, 2005; Fredrickson & Harrison, 2005; Gapinski, Brownell, & LaFrance, 2003; Miner-Rubino, Twenge, & Fredrickson, 2002; Szymanski & Henning, 2007; see Calogero et al., 2011, for full review). Particularly detrimental outcomes of self-objectification for girls may be body dissatisfaction and decreased self-worth. Girls with high levels of self-objectification perceive their value as being derived primarily from their appearance, and thus meeting the dominant beauty ideal becomes extremely important (Fredrickson & Roberts, 1997). Girls who self-objectify, then, may hold themselves more strictly to such dominant standards of beauty and may be more likely to feel dissatisfied with their body shape and size if it fails to meet such standards

(Fredrickson & Roberts, 1997). Indeed, self-objectification has been positively associated with body dissatisfaction in several studies of adult females (Morry & Staska, 2001; Myers & Crowther, 2007; Strelan, Mehaffey, & Tiggemann, 2003), but how self-objectification relates to the body dissatisfaction of adolescent girls is unknown. Additionally, girls who self-objectify may feel valued for their appearance instead of for their intrinsic characteristics, such as intelligence, personality, ideas, feelings, or attitudes (Fredrickson & Roberts, 1997). This devaluing of inherent traits that make someone unique is likely to impact a person's global sense of self-worth (Tylka & Sabik, 2010). Though self-objectification has been negatively associated with self-worth in Australian older adolescent and young adult females (Strelan et al., 2003) and American adolescent girls (Tolman, Impett, Tracy, & Michael, 2006), these samples were predominantly Caucasian. Thus, how self-objectification may impact the body dissatisfaction of ethnic minority girls is in need of study.

Self-Surveillance and Adolescent Girls

Self-surveillance refers to habitual monitoring of the body's outward appearance (McKinley & Hyde, 1996). If girls and women believe their outward appearance determines how they will be valued and treated by others, vigilantly monitoring their appearance (i.e. self-surveillance) may allow them to anticipate, and thus exert some control over, how others perceive them (Calogero et al., 2011). Research with Caucasian women has found self-surveillance to be strongly associated with self-objectification (Steer & Tiggemann, 2008; Tiggemann & Kuring, 2004; Tiggemann & Slater, 2001), and

self-surveillance is theorized to, like self-objectification, also develop as a consequence of accumulated sexual objectification experiences. In support of this notion, in a sample of predominantly Caucasian 10- to 12-year-old girls, pubertal development was positively associated with self-surveillance among girls but not boys (Lindberg, Hyde, McKinley, 2006). Moreover, pubertal development was indirectly associated with self-surveillance through sexual objectification: girls with visible pubertal development were more likely to be the targets of sexual harassment from peers, and in turn, girls who experienced more sexual harassment engaged in higher levels of self-surveillance (Lindberg, Grabe, & Hyde, 2007). Therefore, the bodily changes and resulting experiences that occur for girls throughout the transition to adolescence may trigger the development of self-surveillance.

Like self-objectification, self-surveillance has been linked with an array of negative consequences, including depressive symptoms, eating disorder symptoms, impaired awareness of internal bodily cues, and fewer flow states (Greenleaf, 2005; Muehlenkamp & Saris-Baglama, 2002; Tylka & Hill, 2004). However, particularly important consequences of self-surveillance for girls may be body dissatisfaction and decreased self-worth. Constant vigilance to appearance may heighten their awareness of flaws or ways the body does not match the dominant beauty ideal (Frederick, Forbes, Grigorian, & Jarcho, 2007). Indeed, self-focused attention is highly correlated with body dissatisfaction (Heatherton, 1993). Research with women has found self-surveillance to be positively associated with body dissatisfaction (Frederick et al., 2007; Grippo & Hill,

2008; Tiggemann & Lynch, 2001). Although self-surveillance has been linked with body dissatisfaction in a sample of Swiss adolescents (Knauss, Paxton, & Alsaker, 2008), this relation has not been examined in the United States or among girls of color. In addition, self-surveillance may lead to decreased self-worth because it suggests girls are repeatedly monitoring how society may be evaluating their appearance. Given that the Western societal ideal of beauty is unrealistic and unattainable for most girls, it is likely that in Western society, many of these repeated evaluations may result in girls deciding they do not “measure up”. Habitually surveying her appearance, and repeatedly deeming she falls short of what she would like to look like, may lead a girl to suffer decreased self-worth (Tylka & Sabik, 2010). Indeed, self-surveillance has been negatively associated with self-worth in several samples of women (Aubrey, 2006b; Fiissell & Lafreniere, 2006; Mercurio & Landry, 2008; McKinley, 1998; McKinley, 2006a; Tylka & Sabik, 2010). However, whether self-surveillance is associated with decreased self-worth in ethnic minority girls is unknown.

Potential Protective Factors Related to Self-Objectification and Self-Surveillance

BMI as a Protective Factor

Research with both adult and adolescent females has consistently suggested that BMI is unrelated to whether an individual is likely to engage in self-objectification or self-surveillance (Daubenmeier, 2005; Frederick et al., 2007; Harrison & Frederickson, 2003; Greenleaf, 2005; (Frederickson et al., 1998; Gapinski et al., 2003; Greenleaf, 2005; Noll & Frederickson, 1998; Slater & Tiggemann, 2002). However, BMI may

influence how self-objectification and self-surveillance relate to body dissatisfaction and self-worth. One study with an ethnically-diverse sample of adult women found that the relation of self-surveillance and body dissatisfaction was moderated by BMI, with the relation significantly stronger among women who were overweight or obese (Frederick et al., 2007). It is hypothesized that because females with higher BMI deviate more from the thin ideal, they may experience more negative self-evaluations from self-objectification and self-surveillance (Frederick et al. 2007). This is consistent with a study that used experience sampling method to demonstrated that among women who deem themselves attractive, self-surveillance can actually produce temporary increases in positive mood (Breines, Crocker, & Garcia, 2008). Thus, lower BMI may be protective in buffering the potential negative relation of self-objectification and self-surveillance to body dissatisfaction and self-worth. However, this has not been examined with self-objectification nor with adolescents. Indeed, although most of the literature on self-objectification and self-surveillance has included measures of BMI, almost all of these studies only examined BMI as a covariate (e.g., Frederickson et al., 1998; Gapinski et al., 2003; Greenleaf, 2005; Greenleaf & McGreer, 2006; Noll & Frederickson, 1998; Slater & Tiggemann, 2002).

Ethnicity as a Protective Factor

Consistently within the body image and self-worth literature, there is evidence suggesting that ethnicity may serve as a protective factor. Among girls, African-Americans appear to be protected from developing the same level of body dissatisfaction

and decreased self-worth experienced by adolescents of other ethnicities (Adams et al., 2006; Grabe & Hyde, 2006). Research suggests that African-American females tend to be more satisfied with their bodies compared to Caucasian, Latina, and Asian females in part because they adopt a larger ideal body size, are more accepting of overweight status, and experience less social pressure about their bodies (Striegel-Moore, Schreiber, Pike, Wilfley, & Rodin, 1995). Among adolescent girls, African-Americans have been found to place less emphasis on external beauty and feel more satisfied with their bodies than Caucasian girls despite weighing more on average (Parker, Nichter, Vuckovic, Sims, & Ritenbaugh, 1995; Story, French, & Resnick, 1995). Research comparing body image of Latinas in the United States to females of other ethnicities has been less clear. In Latin American culture, a larger body size for women is valued as healthier and indicating higher status (Gil-Kashiwamura, 2002). Indeed, in the United States, several studies have found Latina women to report less body dissatisfaction than their Caucasian counterparts (Barry & Grilo, 2002; Demarest & Allen, 2000; Suldo & Sandberg, 2000; Franko & Herrera, 1997). However, numerous studies have suggested that Latina females may experience as much or even more body dissatisfaction compared to White females (e.g., Cachelin, Rebeck, Chung & Pelayo, 2002; Robinson et al., 1996; Miller et al., 2000; Walker, Timmerman, Kim, & Sterling, 2002). Although the overwhelming majority of these studies used Caucasian women as the comparison group, a meta-analysis suggested that among Latina women experience more body dissatisfaction than African-American women (Grabe & Hyde, 2006).

Less is known though about ethnic differences in self-objectification and self-surveillance. To date, it appears that three studies have examined how ethnicity may influence a girl's likelihood of developing self-objectification, though they found conflicting results. The first study examined 10- to 22-year-old females (19% of whom were African-American girls and 17% of whom were Latina) and found African-American females to have significantly less self-objectification than Latinas (Tolman & Porche, 2000). The second study examined 12- to 15-year-old girls (20% of whom were Latina and 4% of whom were African-American) and found no ethnic differences in levels of self-objectification (Tolman, Impett, Tracy, & Michael, 2006). In line with this finding, Harrison and Fredrickson (2003) found no ethnic differences in self-objectification in their above-mentioned sample of 10- to 19-year-old females, which included approximately 42% African-American, 30% Caucasian, 11% biracial, and 3% Latina females. However, these two studies had a very low number of African-American (Tolman et al., 2006) and Latina (Harrison & Frederickson, 2003) participants and thus may not have been able to detect differences between these two groups. Among adult females, African-American women were found to have significantly lower levels of self-objectification than Asian and Caucasian women, and Latina women were found to have significantly higher levels of self-objectification than participants of other ethnicities (Hebl, King, & Lin, 2004). Another study comparing 156 Caucasian and 70 African-American college women found self-surveillance to predict an increase in weight/shape concern over time among Caucasian but not African American participants (Fitzsimmons

& Bardone-Cone, 2011). Thus, among studies with substantial numbers of African-American and Latina participants, there is some evidence that African-American females may be somewhat protected from developing self-objectification while Latinas may be particularly vulnerable to it. However, given the conflicting evidence, more research is needed to clarify how ethnicity may influence the development of self-objectification.

Ethnicity may also influence the likelihood of engaging in self-surveillance, though little information is available on ethnic differences in self-surveillance. In a study of undergraduate females that included Asian, Caucasian, and Latina participants (Frederick et al., 2007), self-surveillance was found to be equally prevalent across ethnicities. However, no studies have yet examined ethnic differences in self-surveillance in samples that include girls or African-American females.

Research suggests that ethnicity may also moderate the impact of self-surveillance, but not self-objectification, on body dissatisfaction and self-worth. Hebl and colleagues (2004) reported that despite ethnic differences in baseline levels of self-objectification among women, women across ethnicities experienced equal increases in body shame and decreases in self-worth when self-objectification was experimentally induced. Similarly, the above-mentioned study by Harrison and Fredrickson (2003) found self-objectification to be related to body shame equally across their ethnically-diverse sample of 10-19 year old females. Thus, while certain ethnic groups may be less likely to develop self-objectification in the first place, females who do may suffer equal detriments to body satisfaction and self-worth, regardless of ethnicity.

In contrast, Frederick and colleagues (2007) found the relation between self-surveillance and body dissatisfaction to be significantly stronger in Hispanic women as compared to White women. The authors theorized that self-surveillance may impact body dissatisfaction more powerfully among ethnic minority females as it may highlight how they deviate from the prevalent White beauty ideal (e.g., very thin). Similarly, self-surveillance was found to be negatively associated with self-worth among a sample of exotic dancers, but not related to self-worth among a sample of college women (Downs, James, & Cowan, 2006). Researchers suggested that ethnic differences between the samples may have contributed to this discrepancy; while the college sample was only 27.3% White, the sample of exotic dancers was 47.5% White (Moradi & Huang, 2008). This suggests that ethnicity may influence how self-surveillance impacts self-worth. In sum, while there is some evidence that ethnicity may moderate the impact of self-surveillance but not self-objectification on both body dissatisfaction and self-worth, these relations are poorly understood among ethnic minority girls.

Perceived Athletic Competence as a Protective Factor

A third protective factor that may mitigate the influence of self-objectification and self-surveillance on body dissatisfaction and self-worth is perceived athletic competence (PAC). PAC refers to an individual's evaluation of her relative skills in sports or physically active games (Ridgers, Fazey, & Fairclough, 2007). Perceiving their bodies as athletically competent may help girls focus on their body's functionality instead of just its physical appearance. In this way, PAC may counteract the effects of self-objectification

and self-surveillance, as valuing one's body for its abilities more than its appearance is the exact opposite of how self-objectification and self-surveillance are often conceptualized (Menzel & Levine, 2011). Girls who perceive themselves as good at athletics may be more likely to have positive feelings towards their bodies, irrespective of their shape or size. Furthermore, PAC may help girls actually value aspects of their bodies that deviate from the societal ideal but are helpful for sports. In support of these notions, several studies have found evidence that PAC may promote body satisfaction among females (Bowker, Gadbois, & Cornock, 2006; Davison et al., 2007). PAC may also mitigate the effects of self-objectification and self-surveillance on self-worth, as feeling competent (and in particular, physically competent) fosters positive self-concept (Harter, 1986; Marsh, 1984). Indeed, PAC has been demonstrated to relate to increased self-worth among elementary school girls (Slutzky & Simpkins, 2009) and adolescent girls (Bowker et al., 2006; Davison et al., 2007; Karr et al., 2013). Thus, if girls self-objectify or engage in self-surveillance but also perceive themselves as athletically competent, they may be less likely to suffer detriments to their body satisfaction or self-worth.

BMI, ethnicity, and perceived athletic competence (PAC) may also interact to moderate the relations of self-objectification and self-surveillance to body dissatisfaction and self-worth. For instance, whether PAC buffers the impact of self-objectification and self-surveillance on body dissatisfaction and self-worth may vary by BMI or ethnicity. Additionally, how BMI influences the relations of self-objectification and self-

surveillance to body dissatisfaction and self-worth may depend upon ethnicity. That is, interactions between BMI, ethnicity, and PAC may be important to consider as moderating factors.

Moderators of the Relation Between Body Dissatisfaction and Self-Worth

Body dissatisfaction significantly impacts the self-worth of most adolescent girls (Brown et al., 1998; Nishina, Ammon, Bellmore, & Graham, 2006; van den Berg, Mond, Eisenberg, Ackard, & Neumark-Sztainer, 2010). However, some factors have been found to moderate this relation. For example, the impact of body dissatisfaction on self-worth may be somewhat weaker for African-American girls and girls of low socioeconomic status, although even among these demographics the relation is still significant (van den Berg et al., 2010). Given that body dissatisfaction is widespread across ethnicities and income levels in girls as young as even third-grade (Robinson, Chang, Hayden, & Killen 2001), understanding factors that may render girls more vulnerable to or protected against the effects of body dissatisfaction on self-worth would be valuable. Self-objectification and self-surveillance are two factors that may exacerbate the effects of body dissatisfaction on self-worth. In contrast, as previously discussed, PAC may buffer the impact of body dissatisfaction on self-worth, such that girls who experience body dissatisfaction may not experience the same decreases in self-worth if they perceive themselves as athletically competent.

For girls who engage in higher levels of self-objectification and self-surveillance, their estimation of their own value may be closely tied to how their bodies appear to and

are evaluated by others (Frederickson & Roberts, 1997). Among these girls, body dissatisfaction would presumably be even more detrimental to self-evaluations of worth. Indeed, a study of predominantly Caucasian college women found self-surveillance to moderate the relation between body dissatisfaction and eating disorder symptoms, such that body dissatisfaction and eating disorder symptoms were positively related for women with higher levels of self-surveillance but not significantly related for women with lower levels of self-surveillance (Tylka, 2004). This suggests that self-surveillance may strengthen the degree to which body dissatisfaction causes distress. Similarly, in another study of Caucasian undergraduate women, self-objectification was found to moderate how strongly a positive or neutral evaluation of participants' character or appearance impacted their mood (Fea & Brannon, 2006). Among participants with high levels of self-objectification, women who received a positive evaluation reported more positive mood than women who received a neutral evaluation (Fea & Brannon, 2006). However, among participants with low levels of self-objectification, no differences in mood were reported (Fea & Brannon, 2006). These results suggest that self-objectification may strengthen how strongly women's appearance relates to how they feel. However, no studies have examined how self-objectification and self-surveillance may strengthen the relations between body dissatisfaction and self-worth.

In contrast to self-objectification and self-surveillance, PAC may weaken the association between body dissatisfaction and self-worth. Having a domain of self-competence (such as athletic competence) enables youth to construct positive self-

schemas that may help to compensate for domains in which they feel relatively incompetent (such as appearance) (Seroczynski, Cole, & Maxwell, 1997). Girls who perceive themselves as athletically competent may also be more likely to value the functionality of their bodies, rather than its appearance, and therefore may not suffer as much of a blow to their self-worth if their bodies are not their ideal size or shape (Tylka & Augustus-Horvath, 2011). Furthermore, certain body shapes and sizes facilitate competence in certain athletic endeavors (and vice versa). Among girls who perceive themselves as competent at a sport, dissatisfaction with their body shape or size may not negatively impact their self-worth if that body shape or size helps them perform well in a sport (e.g., basketball).

Current Study

Specific Aims and Hypotheses

Specific aim 1. Examine the relations of self-objectification and self-surveillance to body dissatisfaction and self-worth in a sample of adolescent ethnic minority girls.

It is hypothesized that self-objectification and self-surveillance will both be positively associated with body dissatisfaction and negatively associated with self-worth. Additionally, it is hypothesized that self-surveillance will contribute more variance than self-objectification to body dissatisfaction and self-worth.

Specific aim 2. Examine whether BMI, ethnicity, and PAC moderate the relations of self-objectification and self-surveillance to both body dissatisfaction and self-worth.

Aim 2a. Examine whether BMI moderates the relation of self-objectification and self-surveillance to both body dissatisfaction and self-worth.

It is hypothesized that among girls with high BMI, the relations of self-objectification and self-surveillance to body dissatisfaction and self-worth will be stronger as compared to these relations among girls with low BMI.

Aim 2b. Examine whether ethnicity moderates the relation of self-objectification and self-surveillance to both body dissatisfaction and self-worth.

It is hypothesized that among African-American girls, the relations of self-objectification and self-surveillance to body dissatisfaction and self-worth will be weaker as compared to these relations among Latina girls.

Aim 2c. Examine whether PAC moderates the relation of self-objectification and self-surveillance to both body dissatisfaction and self-worth.

It is hypothesized that among girls with greater PAC, the relations of self-objectification and self-surveillance to body dissatisfaction and self-worth will be weaker as compared to among girls with less PAC.

Aim 2d. Examine whether the interactions between BMI, ethnicity, and PAC moderate the relation of self-objectification and self-surveillance to body dissatisfaction and self-worth.

It is hypothesized that relations of self-objectification and self-surveillance to body dissatisfaction and self-worth will be strongest among Latina girls with high BMI and low PAC.

Specific aim 3. Examine whether self-objectification, self-surveillance, and PAC moderate *the relation between* body dissatisfaction and self-worth.

It is hypothesized that among girls with higher levels of self-objectification and among girls with higher levels of self-surveillance, the relation between body dissatisfaction and self-worth will be stronger as compared to among girls who have low levels of self-objectification or self-surveillance. Additionally, it is hypothesized that among girls with greater PAC, the relation between body dissatisfaction and self-worth will be weaker as compared to among girls with less PAC.

CHAPTER TWO

METHOD

Study Design and Procedures

Data for this study was taken from the first time points of each of two waves of a larger, two-year study evaluating the effectiveness of a Chicago summer camp for girls. The summer camp and corresponding study were advertised through mailings to parents of girls who had participated in an after-school program also run by the organization that provides the summer camp. The after-school program is administered in urban communities, with low-income status ranging from 72.3% to 98.1% as indicated by the Chicago Public School city and school report.

Participants

Participants (N=69) were 10- to 14-year-old girls participating in a summer camp in 2012 or 2013. Ethnicity information was obtained from the summer camp enrollment forms completed by parents. The participants were African American (46.4%), Latina (44.9%), Caucasian (2.9%), Asian-American (2.9%), and other (2.9%). Though 69 participants were enrolled in the larger study, only African American (n=32) and Latina girls (n=31) were considered in this study (n=63). No significant differences were found between the study subsample and overall sample from which they were drawn on any study variables. Post-hoc power analyses revealed that the sample size provided sufficient (i.e., 80%; Cohen, 1988) power to detect significant ($p < .05$) small effects of a single

independent variable in linear regression analyses. However, sample size only provided sufficient power to detect significant medium effects in multiple regression analyses with multiple predictor variables.

Families were mailed consent forms in either English or Spanish, a cover letter explaining the study, and forms for summer camp enrolment. Prior to the start of summer camp, all consented girls were invited to attend a camp information session, where they were assented and completed surveys individually or in small groups with a research assistant.

Measures

Demographics

Demographic measures included birth date, age, and grade in school. Ethnicity was obtained from the program demographic database or surveys completed by parents. Ethnicity was recoded into (0,1) form.

Self-objectification

Self-objectification was assessed using a 4-item Likert scale modeled after the Self-Objectification Questionnaire (SOQ, Noll & Fredrickson, 1998), a measure of self-objectification commonly used among older adolescents and adults. As in the SOQ, self-objectification was conceptualized as the degree to which participants value observable, appearance-based bodily attributes (e.g. body size) as compared to non-observable, competence-based attributes (e.g. strength). To make the scale more appropriate for preadolescents, it was shortened and changed from a rank-order scale to a 3-point Likert

scale. Participants were asked to rate how important to them each of four attributes of their bodies were, from *Not Important* (0) to *Very Important* (2). Two of the attributes were appearance-based and will be summed to create a subscale representing the importance of appearance-based attributes (AB subscale). The other two attributes were competence-based and will be summed to create a subscale representing the importance of competence-based attributes (CB subscale). Subscale scores will range from 0-2, with higher scores reflecting increased importance either appearance-based or competence-based attributes. A self-objectification score is created by calculating discrepancy scores between the AB subscale and CB subscale. Scores range from -4 to 4, with higher scores indicating greater self-objectification. Cronbach's alpha was .744 for the AB subscale and .33 for the CB subscale.

Self-surveillance

Self-surveillance was assessed using the surveillance subscale of the Objectified Body Consciousness Scale for Youth (OBC-Youth; Lindberg et al., 2006). The measure consists of 4 items such as "I often compare how I look with how other people look." Participants rate their agreement with each item on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). A composite score was created by computing the mean of the items. Higher scores indicate greater self-surveillance. The subscale has demonstrated strong test-retest reliability (.81) as well as validity with youth as young as 10 years old (Lindberg et al., 2006). Cronbach's alpha for this sample was .84, indicating strong internal consistency.

Body dissatisfaction

Body dissatisfaction was assessed using a visual figure rating scale consisting of eight silhouette drawings from very thin (0) to very large (7) in body size that was adapted for use with ethnic minority girls (Stunkard, Sorenson, & Schulsinger, 1983). Participants are asked to select the silhouette that looks the most like them (perceived actual body), and the silhouette that looks how they would like to look (ideal body). Higher actual body scores are indicative of endorsing a larger actual body type, and higher ideal body scores designate endorsement of a less emaciated ideal body. A measure of body dissatisfaction is obtained by calculating the difference between actual and ideal body silhouettes, with higher scores indicating more body dissatisfaction. This visual figure rating scale has demonstrated reliability and validity (Banasiak, Wertheim, Koerner, & Voudouris, 2001; Thompson & Altabe, 1990) and has been used in studies of pre-adolescent ethnic minority girls (Sherwood et al., 2003).

To further support validity of the visual rating scale, participants in the second summer of data collection (n=33) were administered an additional 2-item measure of body esteem adapted from the Body Dissatisfaction subscale of the Eating Disorder Inventory-3 (EDI-3; Garner, 2004). Participants were asked to rate each item (“I feel happy with the shape of my body”, “I feel happy with the size of my body”) on a 6-point Likert scale ranging from 0 (*never*) to 6 (*always*). Cronbach’s alpha for this body esteem scale was .91. The body esteem scale was significantly negatively associated with the

body dissatisfaction measure, $r=-.46$, $p=.007$. This suggests the visual figure rating scale indeed captured body dissatisfaction in the sample.

Self-worth

The Rosenberg Self-Esteem Scale (RSE, Rosenberg, 1965), a measure of global self-esteem, was used to measure self-worth. The scale consists of 10 statements with which participants are asked to rate their agreement on a 4-point scale from 0 (*strongly disagree*) to 3 (*strongly agree*). Items include statements such as, “Sometimes, I think I am no good at all.” The RSE has demonstrated test-retest reliability ranging from .85 to .88 (Silbert & Tippett, 1965) and strong validity (Rosenberg, 1979). A Cronbach’s alpha of .85 was found for this study’s sample, suggesting strong internal consistency.

zBMI

BMI was obtained from height and weight measurement. Participants’ weight was measured without shoes to the nearest pound using a digital scale, and height was measured to the nearest inch. Standardized BMI scores (zBMI) were used in all analyses instead of BMI because BMI in children is age-specific. BMI z-scores were calculated based on the BMI-for-age percentile formulas outlined by the Centers for Disease Control and Prevention (CDC) national norms using age to the nearest month and gender-specific median.

PAC

The Athletic Competence subscale of Harter’s Self-Perception Profile for Children (SPPC; Harter, 1985) was used to assess PAC. The subscale consists of five

items, each consisting of two sentences. In each item, one sentence describes high athletic competence, and the other describes low athletic competence (e.g., “Some girls are good at all kinds of sports... BUT... Other girls don’t feel that they are very good when it comes to sports.”) To reduce social desirability bias, the order of high and low competence sentences is reversed. For each item, participants are first asked to decide which sentence best describes them. Then, participants are asked to select whether that sentence is “really true” for them or “sort of true” for them. Each item is scored 0-3, with higher scores reflecting greater PAC. A composite PAC score is created by summing participants’ scores on all five items. The SPCC is the most widely used measure of youth perceived competency and demonstrates good internal consistency (Cronbach’s $\alpha = .81$), test-retest reliability ($r = .84$), and validity (Muris, Meesters, & Fijen, 2003). Cronbach’s alpha for this sample was .45.

CHAPTER THREE

RESULTS

Data Preparation

The presence of outliers and skewness were examined first (Tabachnick & Fidell, 2012), and all values were within an acceptable range. Missing values were addressed with a mean imputation procedure; a score for missing values was imputed if the participant responded to at least 80% of items on a scale. For example, the RSE scale contains 10 items, but if the participant has completed at least 8 of those items, a mean score was imputed for the missing value(s) based on the participant's responses to the completed items on the scale. Composites were then calculated for the self-objectification scale, the surveillance subscale of the OBC-Y, the RSE, and body dissatisfaction. Preliminary descriptive analyses were conducted with all study variables.

Descriptive Analyses

Mean levels of study variables are listed in Table 1 for the overall sample, as well as for African American and Latina girls separately. Significant correlations emerged with several study variables (see Table 2). Self-objectification was significantly positively associated with self-surveillance ($r=.28, p=.002$), suggesting that girls with higher levels of self-objectification reported higher levels of self-surveillance. Age was significantly positively correlated with both self-objectification ($r=.28, p=.029$) and self-surveillance ($r=.28, p=.026$), indicating that older girls reported greater self-

objectification and self-surveillance. zBMI was significantly positively associated with body dissatisfaction ($r=.69, p<.001$), suggesting that girls with higher BMI reported greater body dissatisfaction. Independent t-test analyses indicated no ethnic differences in study variables with the exception of self-worth ($t(61)=3.054, p=.003$). Specifically, Latina girls ($M=19.6$) reported significantly lower self-worth than African American girls ($M=23.4$).

Table 1. Description of participant characteristics (N=63; n=32 African American, n=31 Latina)

	Overall <i>M (SD)</i>	African American <i>M (SD)</i>	Latina <i>M (SD)</i>
Ethnicity (%)			
African American	39.10	--	--
Latina	60.90	--	--
Age	12.02 (1.00)	12.12(1.07)	11.92(1.11)
Self-Objectification	-.68 (1.32)	-.63(1.43)	1.65 (1.47)
AB subscale		2.75(1.32)	2.48(1.15)
CB subscale		3.38(0.79)	3.23(.84)
Self-Surveillance	3.0 (1.00)	2.81 (1.05)	3.19 (.93)
Body Dissatisfaction	1.00 (1.34)	.91(1.49)	1.10(1.19)
Self-Worth	21.58(5.27)	23.33(4.30)	19.6**(5.55)
zBMI	.92 (1.05)	.94(.95)	.90(1.16)
PAC	7.65(2.91)	7.69(2.92)	7.61(2.96)

Note. (*) $p<.05$, (**) $p<.01$ represents significant ethnic group differences.

Table 2. Correlations among study variables

	1	2	3	4	5	6	7	8
1 Age								
2 Self-Objectification	.28*							
3 Competence-Based Subscale	-.12	-						
4 Appearance-Based Subscale	.22	.80**	.23					
5 Self-Surveillance	.28*	.38**	.03	.42**				
6 Body Dissatisfaction	-.21	-.05	.07	.00	.01			
7 Self-Worth	.19	-.12	.26*	.04	-.29*	-.09		
8 zBMI	.15	-.00	-.05	-.04	-.06	.69**	.01	
9 Perceived Athletic Competence	-.21	-.16	.26*	.01	-.10	-.16	.27*	-.21

Note: ** signifies $p < .01$; * signifies $p < .05$

Relations of Self-Objectification and Self-Surveillance to Body Dissatisfaction

To determine how self-objectification and self-surveillance relate to body dissatisfaction hierarchical multiple regression analyses were conducted. In Step 1, self-objectification and self-surveillance were entered as simultaneous predictors, and body dissatisfaction was entered as the outcome. Both IVs were centered by subtracting the mean from the raw data scores. zBMI, ethnicity, and PAC were added in Step 2 of the regression equation. zBMI and PAC were centered by subtracting the mean from the raw data scores. Two-way interaction terms were then entered in Step 3, and three-way interaction terms were entered in Step 4.

Neither self-objectification nor self-surveillance were significantly associated with body dissatisfaction ($p > .05$). There was however, a significant main effect for zBMI

on body dissatisfaction ($p < .001$), suggesting that girls with higher zBMIs were more dissatisfied with their bodies. None of the two-way interactions were significant. The three-way interaction of Self-objectification x zBMI x Ethnicity was significantly associated with body dissatisfaction, ($p = .02$). Post-hoc probing of the significant three-way Self-objectification X zBMI X Ethnicity interaction was conducted with tests of simple slopes, using procedures outlined by Holmbeck (2002). First, regressions were run to examine whether significant two-way interactions emerged at high and low values of one of the moderating variables (ethnicity). Specifically, whether the Self-objectification X zBMI interaction was significantly associated with body dissatisfaction was tested separately for Latina and African American girls. The Self-objectification X zBMI interaction was significantly related to body dissatisfaction among African-American girls ($\beta = -.375$, $t(28) = -2.926$, $p = .007$), but not among Latina girls. This indicated that among Latina girls, the relation between self-objectification and body dissatisfaction was not influenced by zBMI. However, among African American girls, the relation between self-objectification and body dissatisfaction depended upon zBMI.

To probe this significant two-way Self-objectification X zBMI interaction among African American girls, conditional moderating variables were created in order to test the relation between self-objectification and body dissatisfaction at high and low levels of zBMI. Regressions were then run incorporating the main effect of self-objectification, the conditional variables, and the interaction between the two (Holmbeck, 2002). The interaction was then plotted by substituting high (1 SD above the mean) and low (1 SD below the mean) values of self-objectification and zBMI for African American girls (see

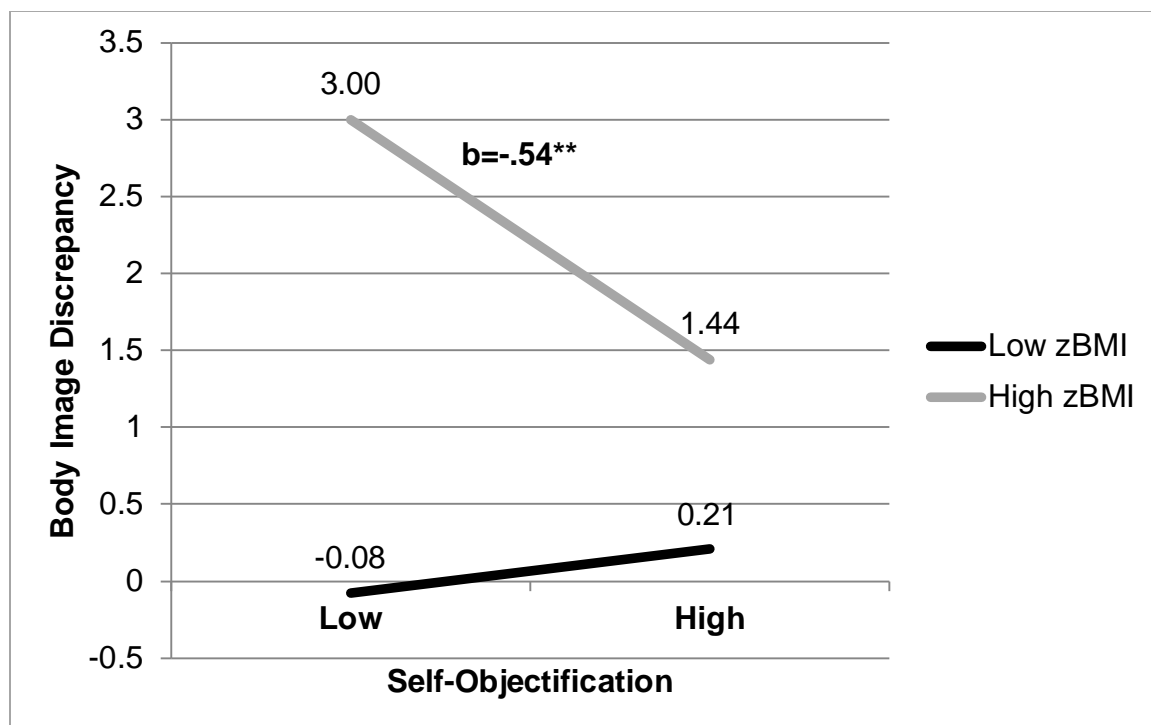
Figure 1). These simple slopes tests revealed that among African-American girls with low zBMI, self-objectification was not significantly related to body dissatisfaction ($p > .05$). This suggests that among African American girls with low zBMI, self-objectification is unrelated to body dissatisfaction. However, among African American girls with high zBMI, self-objectification was significantly negatively associated with body dissatisfaction ($p = .02$). This suggests that among African American girls with high zBMI, girls who self-objectify more report less body dissatisfaction.

Table 3. Hierarchical multiple regression analyses predicting body dissatisfaction from self-objectification, self-surveillance, and moderating variables

Variable	ΔR^2	β
Step 1	.00	
Self-objectification		-.06
Self-surveillance		.03
Step 2	.49***	
zBMI		.69***
Ethnicity		-.03
PAC		.07
Step 3	.10	
Self-Objectification x zBMI		-.19+
Self-Surveillance x zBMI		.08
Self-Objectification x Ethnicity		.16
Self-Surveillance x Ethnicity		.14
Self-Objectification x PAC		.09
Self-Surveillance x PAC		.07
zBMI x Ethnicity		-.18
zBMI x PAC		-.00
Ethnicity x PAC		-.01
Step 4	.09	
Self-Objectification x zBMI x Ethnicity		.43*
Self-Surveillance x zBMI x Ethnicity		.09
Self-Objectification x zBMI x PAC		-.04
Self-Surveillance x zBMI x PAC		-.26
Self-Objectification x Ethnicity x PAC		-.01
Self-Surveillance x Ethnicity x PAC		.09
zBMI x Ethnicity x PAC		.23
Total R ² (Total Adjusted R ²)	.72 (.55)	

Note. + $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

Figure 1. Relation between self-objectification and body dissatisfaction at low and high zBMI among African American girls



Note. ** $p < .01$. Higher body image discrepancy represents greater body dissatisfaction.

Relations of Self-Objectification and Self-Surveillance to Self-Worth

Hierarchical multiple regression analyses were also conducted using the same procedure as outlined above to examine how self-objectification and self-surveillance relate to self-worth. Self-objectification was not significantly associated with self-worth. However, higher levels of self-surveillance were significantly associated with lower levels of self-worth ($p = .038$).

A significant main effect of ethnicity was found, with African-American girls reporting higher self-worth compared to Latina girls ($p = .005$). A significant main effect of perceived athletic competence (PAC) was also observed, with greater PAC associated with greater self-worth ($p = .023$). None of the two way interactions were significant, but

the three-way interaction of Self-objectification X Ethnicity X PAC was significantly associated with self-worth ($p=.004$).

Post-hoc probing of the significant three-way interaction was again examined with tests of simple slopes, using procedures outlined by Holmbeck (2002). Among African American girls, the Self-objectification X PAC interaction was not significantly related to self-worth ($p>.05$). However, among Latina girls, the interaction was significant ($\beta = -.67, t(26) = -2.632, p = .014$). This suggests that among African American girls, the relation between self-objectification and self-worth is the same regardless of a girl's degree of PAC. However, among Latina girls, the relation between self-objectification and self-worth may depend on degree of PAC. Conditional moderating variables were created in order to test the relation between self-objectification and self-worth at high and low levels of PAC. Regressions were then run incorporating the main effect of self-objectification, the conditional variables, and the interaction between the two (Holmbeck, 2002). The interaction was then plotted by substituting high (1 SD above the mean) and low (1 SD below the mean) values of self-objectification and PAC for Latina girls (see Figure 2). These simple slopes tests revealed that among Latina girls with low PAC, self-objectification was not significantly related to self-worth ($p>.05$). However, among Latina girls with high PAC, self-objectification was significantly negatively associated with self-worth ($\beta = t(41) = -2.41, p = .02$). This suggests that among Latina girls with high PAC, girls who self-objectify report lower self-worth.

Table 4. Hierarchical multiple regression analyses predicting self-worth from self-objectification, self-surveillance, and moderating variables

Variable	ΔR^2	β
Step 1	.08+	
Self-objectification		-.01
Self-surveillance		-.29*
Step 2	.18**	
zBMI		.02
Ethnicity		-.34**
PAC		.07*
Step 3	.09	
Self-Objectification x zBMI		.09
Self-Surveillance x zBMI		.01
Self-Objectification x Ethnicity		-.11
Self-Surveillance x Ethnicity		-.14
Self-Objectification x PAC		-.04
Self-Surveillance x PAC		.01
zBMI x Ethnicity		.09
zBMI x PAC		-.02
Ethnicity x PAC		.32+
Step 4	.15	
Self-Objectification x zBMI x Ethnicity		-.12
Self-Surveillance x zBMI x Ethnicity		.26
Self-Objectification x zBMI x PAC		-.17
Self-Surveillance x zBMI x PAC		.06
Self-Objectification x Ethnicity x PAC		-.71**
Self-Surveillance x Ethnicity x PAC		.23
zBMI x Ethnicity x PAC		.04
Total R ² (Total Adjusted R ²)	.72 (.55)	

Note. + $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

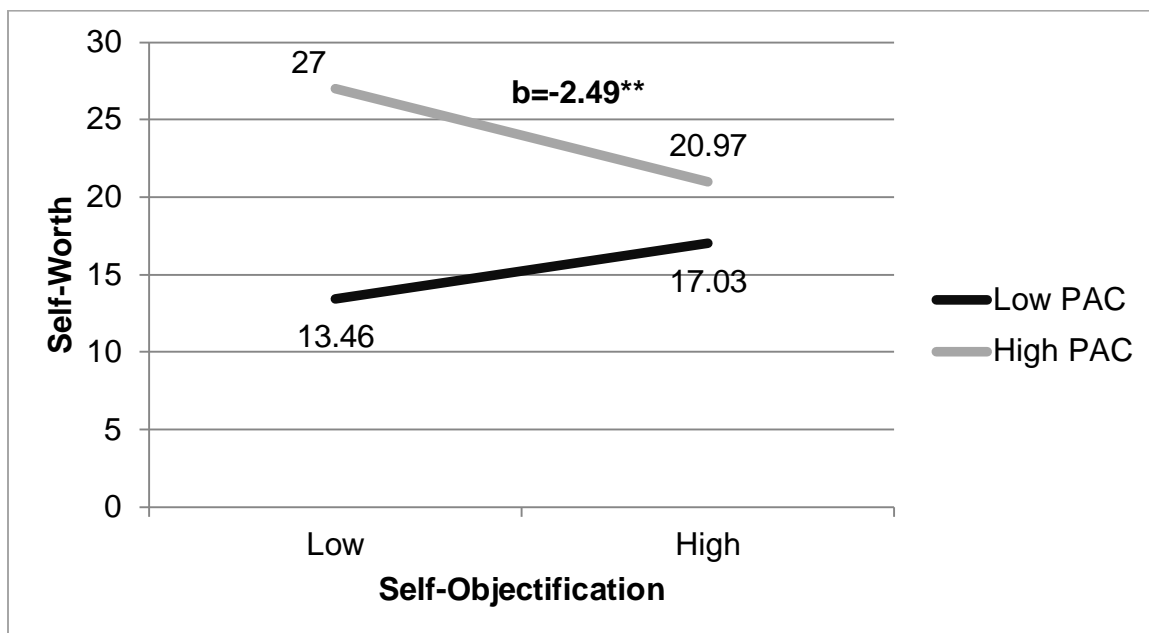


Figure 2. Relation between self-objectification and self-worth at low and high levels of perceived athletic competence among Latina girls
Note. ** $p < .01$. PAC = perceived athletic competence.

Moderators of the Relation between Body Dissatisfaction and Self-Worth

Multiple regression analyses were conducted to determine if self-objectification, self-surveillance, or PAC moderate the relation between body dissatisfaction and self-worth (Baron & Kenny, 1986; Holmbeck, 1997, 2002). First, body dissatisfaction, self-objectification, and self-surveillance (continuous IVs) were entered as predictor variables in Step 1. Next, the two-way interaction terms were entered in Step 2 (body dissatisfaction X self-objectification, body dissatisfaction X self-surveillance). An additional separate regression was conducted with PAC, instead of self-objectification and self-surveillance, as the moderating variable. Body dissatisfaction was not significantly related to self-worth. Additionally, interactions of body dissatisfaction with self-objectification, self-surveillance, or PAC were not significant.

CHAPTER FOUR

DISCUSSION

A growing body of literature suggests that two phenomena, *self-objectification* and *self-surveillance*, have a host of negative consequences for females, including body dissatisfaction and low self-worth (see Calogero et al., 2011, for full review). However, to date few studies have examined the relevance of self-objectification and self-surveillance to adolescent girls, particularly ethnic minority girls, despite adolescence being the developmental stage at which these phenomena likely begin and have the most impact (Lindberg, Hyde, McKinley, 2006; Lindberg, Grabe, & Hyde, 2007; American Association of University Women Foundation, 2001; Fredrickson & Roberts, 1997). Moreover, self-objectification and self-surveillance may help to explain why a large portion of girls, but not boys, develop body dissatisfaction and low self-worth during the transition to adolescence (Adams, Kuhn, & Rhodes, 2006; Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). Utilizing a sample of low-income African American and Latina girls, the goal of this investigation was to investigate the relevance of self-objectification and self-surveillance to body dissatisfaction and self-worth. It was hypothesized that self-objectification and self-surveillance would each be positively associated with body dissatisfaction and negatively associated with self-worth, but that self-surveillance would contribute more variance than self-surveillance to these outcomes. Additionally, BMI, ethnicity, and perceived athletic competence were examined as potential protective

factors. It was hypothesized that the relations of self-objectification and self-surveillance to body dissatisfaction and self-worth would be weakest among African American girls with lower BMI and high perceived athletic competence (PAC). Lastly, it was hypothesized that the relation between body dissatisfaction and self-worth would be exacerbated for girls with higher levels of self-objectification or self-surveillance and buffered for girls with higher levels of perceived athletic competence.

Several important findings emerged when examining main effects of self-objectification and self-worth on outcome variables. First, girls who engaged in more self-surveillance reported lower self-worth. This is consistent with findings from research with Caucasian women (Aubrey, 2006b; Fiissell & Lafreniere, 2006; Mercurio & Landry, 2008; McKinley, 1998; McKinley, 2006a; Tylka & Sabik, 2010). Given Western culture's dominant thin-ideal of beauty, habitually surveying her appearance may lead a girl to repeatedly deem that she falls short of what she should look like, and thus may negatively impact self-worth (Tylka & Sabik, 2010). However, this is the first study to demonstrate this relation among adolescent girls and among ethnic minority girls in particular. That self-surveillance may indeed be associated with lower self-worth among low-income, African American and Latina girls extends prior literature that suggested this relation may only exist among Caucasian females (Downs et al., 2006; Moradi & Huang, 2008). Rather, results of this study suggest that self-surveillance may be detrimental for self-worth among girls regardless of ethnicity. Secondly, consistent with study hypotheses, self-surveillance emerged as more relevant to outcomes than self-

objectification; self-surveillance, but not self-objectification, had an overall main effect on self-worth. Indeed, studies that have examined both self-objectification and self-surveillance have found self-surveillance to link more consistently to outcomes than self-objectification (Greenleaf & McGreer, 2006; Slater & Tiggeman, 2002; Tiggemann & Kuring, 2004; Tiggemann & Lynch, 2001; Tiggemann & Slater, 2001). This lends support to Moradi and Huang's proposal that future Objectification Theory research should focus particularly on self-surveillance rather than self-objectification (2008).

Contrary to expectation, neither self-objectification nor self-surveillance was related to body dissatisfaction. These lack of findings related to body dissatisfaction may be in part due to how body dissatisfaction was measured, as a discrepancy in ideal versus perceived body size and shape. Body image is multifaceted construct comprised of perceptual, attitudinal, affective, and behavioral components that have been operationalized in numerous ways (Gardner, 2011; Roberts, Cash, Feingold, & Johnson, 2006). Self-objectification and self-surveillance may be more likely to relate to more specific aspects of body image than general dissatisfaction with body size, such as dissatisfaction with specific body parts, negative feelings about the body (e.g., appearance anxiety, body shame), or specific beliefs about the body (e.g., appearance-contingent self-worth).

Although self-objectification did not relate to body dissatisfaction or self-worth in the overall sample, it was related to these outcomes in surprising ways among specific subsets of participants. Among African American girls with higher BMIs, self-

objectification was associated with *less* body dissatisfaction. This was contrary to study hypotheses and to findings from studies of Caucasian women that found self-objectification to be associated with more body dissatisfaction (Morry & Staska, 2001; Myers & Crowther, 2007; Strelan et al., 2003). The result also diverges from work by Frederick and colleagues (2007) which found the association between self-objectification and body dissatisfaction to be strongest among heavier and minority women. Authors suggested that this effect was stronger among those women who deviated more from the dominant, Caucasian thin-ideal. However, perhaps low-income, heavier African American girls, a younger demographic, are less likely to endorse Caucasian ideals of beauty. Indeed, non-Caucasian pre-adolescent girls have been found to be just as aware of the thin ideal as their Caucasian counterparts but to internalize it less (Hermes & Keel, 2003). Cultural norms regarding thinness may be less rigid and less extreme among African American females, who may be open to a larger ideal weight and shape than females of other ethnicities (Roberts, Cash, Feingold, & Johnson, 2006; Stice, 2002). Thus, heavier African American girls may have been closer to their ideal body type than their thinner counterparts in our sample. Among these girls, increased valuing of their body's appearance, as opposed to its competence (which may be diminished among overweight and obese girls) may facilitate increased body satisfaction. This idea is consistent with findings from Breines and colleagues (2008), which suggested that some females may experience small psychological benefits from self-objectification. Although most women in their sample experienced decreases in well-being throughout the day after

self-objectifying, women who had high self-esteem and whose self-esteem was highly contingent upon their appearance experienced increases in well-being after self-objectifying (Breines, Crocker, & Garcia, 2008). However, that self-objectification may be associated with some positive psychological outcomes among some groups should be interpreted with caution. Overall, self-objectification is associated with numerous negative effects, and investing resources (time, money, energy) into appearance detracts from girls' ability to develop and succeed in other domains that may be more likely to facilitate sustainable well-being and to contribute to society (Breines et al., 2008; Frederickson & Roberts, 1997).

Another surprising finding was that self-objectification was related to lower self-worth only among Latina girls with high perceived athletic competence (PAC). This contradicts study hypotheses that PAC would be protective and buffer, not strengthen, the relation between self-objectification and self-worth. Feeling competent fosters positive self-concept (Harter, 1986), and PAC specifically has consistently been linked with higher self-worth in girls (Slutzky & Simpkins, 2009; Davison et al., 2007; Bowker et al., 2006). One explanation for this finding is that among Latina girls who did not perceive themselves to be very competent at athletics, those who self-objectified (and thus valued their body's appearance-based attributes over its competence-based attributes) may have been less likely to experience detriment to their self-worth as a result. Another explanation could be that those Latina girls who perceive themselves to be more athletically competent may be more focused on their bodies in general, and thus

perceiving their bodies as objects may have a greater detriment to their self-worth than girls whose bodies factor less into their overall self-concept.

Contrary to study hypotheses, the relation between body dissatisfaction and self-worth was not moderated by self-objectification, self-surveillance, or perceived athletic competence. However, it should also be noted that body dissatisfaction was not related to self-worth in this sample. This is surprising given that the relation between body dissatisfaction and self-worth, although weaker among girls of low socioeconomic status and among African American girls, has been found to still be significant (van den Berg et al., 2010). As mentioned earlier, this may be related to the aspect of body dissatisfaction assessed (discrepancy in ideal versus actual body size). Among low-income, ethnic minority adolescent girls, self-worth may be more likely to relate to other aspects of negative body image.

In addition to specific study aims, several important descriptive characteristics of self-objectification and self-surveillance among low-income, Latina and African American girls were learned. Consistent with hypotheses, increased self-objectification was associated with increased self-surveillance, as theory and research with Caucasian adults suggests (Steer & Tiggemann, 2008; Tiggemann & Kuring, 2004; Tiggemann & Slater, 2001). This suggests that these phenomena are also related among low-income, ethnic minority girls, as they have been found to be strongly correlated among Caucasian women (Steer & Tiggemann, 2008; Tiggemann & Kuring, 2004; Tiggemann & Slater, 2001), and self-objectification is often operationalized in research with measures of self-

surveillance (Calogero et al., 2011). Additionally, self-objectification and self-surveillance were both higher among older girls. This is consistent with research with Caucasian adolescent girls that found that self-surveillance increased with pubertal development (Lindberg et al., 2006). Theorists posit that self-objectification and self-surveillance begin during the transition to adolescence when girls' bodies begin to manifest visible signs of puberty and they in turn begin to experience sexual objectification from peers, family members, and media (American Association of University Women Foundation, 2001; Frederickson & Roberts, 1997; McKinley & Hyde, 1996). Indeed, a longitudinal follow-up study demonstrated the relation between self-surveillance and pubertal development was mediated by sexual harassment experiences (Lindberg et al., 2007). That is, the visible bodily changes that girls experienced as they transitioned to adolescence led to increased sexual objectification by others, which led to girls in turn objectifying themselves.

It is also notable that no ethnic differences were observed in self-objectification or self-surveillance. Findings related to differences in these phenomena between African American and Latina girls have been inconsistent (Tolman & Porche, 2000; Tolman et al., 2006). However, research with women found African-American women to have lower levels of self-objectification than Latina women (Fredericks et al., 2007). It is possible that differences in self-objectification and self-surveillance between Latina and African American females may develop with age.

Limitations and Future Directions

Results of this study should be interpreted cautiously. The small sample size limited statistical power and may have prevented some relations from emerging. Additionally, study data was correlational and thus causal relations cannot be parsed out. Longitudinal research utilizing a larger sample would be particularly fruitful for elucidating the development of self-objectification and self-surveillance over time, including differential trajectories based on race and ethnicity. Lastly, study measures were limited by the availability of psychometrically-sound, feasible tools for measuring self-objectification, perceived athletic competence, and body dissatisfaction of ethnic minority girls in a community setting. As efforts progress to extend psychological research to underrepresented populations and to develop culturally-appropriate, psychometrically-strong measures for these populations, the ability to study psychological constructs among ethnic minority girls will improve. In particular, as Objectification Theory research advances to focus more on girls and on females of diverse cultural backgrounds, thoughtful consideration of the ways in which constructs are measured will be critical. For example, future research should investigate self-objectification and self-surveillance in relation to other aspects of body image, such as body shame and appearance anxiety, among low-income, ethnic minority girls.

Despite limitations, this study makes a small but important contribution to the literature by demonstrating that self-objectification and self-surveillance are indeed experienced by low-income, ethnic minority girls and that self-surveillance may have

negative consequences for their self-worth. In addition, BMI, ethnicity, and perceived athletic competence may be influential components of how girls experience self-objectification and self-surveillance and should be incorporated into research, prevention, and intervention efforts.

APPENDIX A
SELF-OBJECTIFICATION QUESTIONNAIRE

When you think about your body...

- a) How important is it to you **how strong your body is?**
Not important A little important Very important
- b) How important is it to you **how your body looks?**
Not important A little important Very important
- c) How important is it to you **what size your body is?**
Not important A little important Very important
- d) How important is it to you **what your body can do?**
(like how fast you can run)
Not important A little important Very important

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VITA

Kimberly Burdette is a doctoral student at Loyola University Chicago studying clinical psychology with a specialty in child, adolescent, and family issues. She received her B.A. in Psychology from Duke University in 2006. During her time at Duke, she completed an honors independent research project, for which she won the Duke's 2006 Karl E. Zener Award for Outstanding Performance of a Major in Psychology. After graduating, Ms. Burdette led an after-school program for urban girls in Boston, MA, for which she created a research-based curriculum to promote psychological and physical well-being. She later administered neuropsychological tests as Head Psychometrician at a private practice in Boston, MA. Since starting graduate school at Loyola, Ms. Burdette has been a member of Dr. Amy Bohnert's Activity Matters Lab. As part of this lab, Ms. Burdette has worked on a variety of projects in pursuit of her diverse interests with regards to adolescent health. These include projects drawing on samples of low-income, ethnic minority girls to examine the relations between obesogenic behaviors, discretionary time use, and social context; correlates of obesogenic snacking during the after-school hours; relations between physical activity, executive function, and obesity; the impact of school calendar on obesity risk; relations between executive functions, grit, and self-worth; how obesity and body image are spread across social networks; relations between body mass index, physical activity, and leadership qualities; and how engagement is measured in youth settings. Her master's thesis examined links between

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