

Adolescent Girls' Race/ethnic Status, Identities, and Drive for Thinness

Emily M. Boyd
Department of Sociology
Florida State University
Tallahassee FL 32306-2270
Email: emb0796@fsu.edu

John Reynolds
Department of Sociology & Pepper Center on Aging & the Lifecourse
Florida State University
Tallahassee FL 32306-2270
Email: jreynold@fsu.edu

Kathryn Tillman
Department of Sociology & Center for Population Health
Florida State University
Tallahassee FL 32306-2270
Email: ktillman@fsu.edu

Patricia Yancey Martin
Department of Sociology
Florida State University
Tallahassee FL 32306-2270
Email: pmartin@coss.fsu.edu
Telephone: 850 644 6416
Fax: 850 644 6208

Special thanks to Irene Padavic and Judith Lorber for reading earlier drafts of this paper and offering helpful advice. Our paper is based on data from the Add Health project, a program project designed by J. Richard Udry, Peter S. Bearman, and Kathleen Mullan Harris, and funded by a grant P01 HD31921 from the National Institute of Child Health and Human Development, with cooperative funding from 17 other agencies. Special acknowledgment is due Ronald R. Rindfuss and Barbara Entwisle for assistance in the original design. Persons interested in obtaining data files from Add Health should contact Add Health, Carolina Population Center, 123 W. Franklin Street, Chapel Hill, NC 27516-2524: <www.cpc.unc.edu/addhealth/contract.html>

Adolescent Girls' Race/ethnic Status, Identities, and Drive for Thinness

ABSTRACT

Using data from 7,272 adolescent U. S. girls, we explore how girls' race/ethnic group status affects their bodyweight, perceptions of overweight, and weight control practices. We hypothesize that a girl's race/ethnic status influences her basic identity which in turn prompts her to adopt or reject a "drive for thinness." After controlling for family and peer support, school engagement, family SES, maturation, and family structure, we find that girls' race/ethnic status influences their susceptibility to the thinness ideals of mainstream culture. African American girls weigh more than Asian, Hispanic, or White girls, but at any given weight they perceive themselves as overweight and attempt to control their weight less. Asian American and White girls invest most in thinness dynamics. Some evidence also suggests girls from lower SES families are less driven to be thin. Our results affirm the utility of viewing material bodies as "situations" that are experienced and interpreted in accord with identity group relations and dynamics.

Adolescent Girls' Race/ethnic Status, Identities, and Drive for Thinness

In this paper, we ask if an adolescent girl's identity related to a *body project* about *thinness* (Brumberg 1997) is shaped by her race/ethnic status. Substantial research suggests it is. As we review shortly, race/ethnicity is known to be associated with girls' actual (or "objective") weight and perceptions of being overweight (Ge, Elder, Regnerus and Cox 2001; Parker, Nichter, Nichter, Vuckovic, Sims and Ritenbaugh 1995). Also, her actual weight and sense of herself as complying (or not) with particular bodyweight standards are known to affect her mental and physical health, as Ge et al. (2001) report using the same sample and some of the same concepts that we use¹. Lovejoy (2001), who uses the phrase *drive for thinness*, reports that while White women weigh less than African American women, they perceive themselves as overweight more (also Abrams, Allen, and Gray 1993; Casper and Offer 1990). Although these patterns are well-known, Lovejoy (2001) laments our ignorance of *why* they exist.

Our thesis is that a girl's feelings about and evaluations of her body reflect her race/ethnic (and gender and class) *identity(ies)* relative to her physical body which in turn affects the *practices* she undertakes to control (or not) her weight (Bettie 2003; Rucker and Cash 1992). Using this perspective, our analytic strategy is to link actual weight and perceptions about overweight to practices used by girls to manage their bodyweight. Since being overweight is more stigmatizing for girls than for boys (Ge et al. 2001) and girls are more concerned with the issue, our study of a *drive for thinness* focuses on girls². Additionally, recent evidence shows that weight control efforts--such as dieting--are far more prevalent among girls than boys (Friestad and Rise 2004). As we note later,

dieting early in life is associated with eating problems in adulthood thus understanding the conditions that prompt girls to diet and use other methods of weight control is needed³.

Our goal is to analyze race/ethnicity in relation to adolescent girls' *weight control practices/weight control regimes* and other body project issues. Is a girl's propensity to exercise, diet, take diet pills, or vomit to keep her bodyweight in check related to her race/ethnic identity? Our results, reported shortly, answer in the affirmative. They show that race/ethnic status robustly predicts a girl's perceptions about her bodyweight and, to a lesser extent, attempts to control her weight. We interpret these connections as evidence that her identity relative to her physical body is a product of dynamics, values, interpretations, and interactions associated with membership in a particular race/ethnic group (Stryker and Burke 2000).

Popular culture and a good deal of social science research imply that a *drive for thinness* is a general concern for U. S. women and girls (cf. Hesse-Biber 1996 on a "cult of thinness"). Indeed, research by Tiggemann, Gardiner and Slater (2000) with Australian girls suggests it may be worldwide, at least for English-speaking nations. Television, magazines, the fashion industry, movies, and even video games celebrate thin bodies. The feelings girls have about themselves and their bodies are influenced by these venues. Yet some girls (and women) are more affected than others and values, norms, and expectations associated with race/ethnicity seem to be involved (Hebl and Turchin 2005; see Crago, Shisslak, and Estes 1996 offer an overview). It seems that some girls reject *thinness pressures* as a means of resisting the values of mainstream society, perhaps due to historical experiences of their group's members (Stomblor and Padavic 1997) and/or a

greater acceptance of heavier bodies (Latner, Stunkard, and Wilson 2005; Casper and Offer 1990; Warren, Gleaves, Ceped-Benito, Fernandez and Rodriguez-Ruiz 2005).

While we do not view the body as more important to some girls than others, we do expect some girls to valorize thinness more and to be receptive to a body project *drive for thinness* more (Parker et al. 1995; Bordo 2003). Our aim is to explore how race/ethnicity affects a girl's weight control practices after taking into account other possible influences on these practices, e.g., social class, family support, peer/school engagement, maturation and age, immigration status, and family structure.

Theoretically, we reason that a girl's race/ethnic group shapes how she defines, interprets, and treats her physical body. Our premise is that *the social determines how the physical body is read* (Schrock, Reid, and Boyd 2005). The body is not (only) an objective thing with which one is associated; rather, the physical body is socially constructed in accord with prevailing values and practices of one's key identity groups (Cahill 1986; Stryker and Bruce 2000). People have multiple identities that they negotiate and constitute through interaction (Giordano, Longmore, and Manning 2006). A girl's embeddedness in a race/ethnic group shapes her identity relative to her body's weight, size, skin color, hair quality, interpersonal style, and fashion displays (Allan et al. 1993; Bettie 2003; Brown 2003; Lovejoy 2001). White girls' identities are more affected by bodyweight than those of African American girls are, several studies suggest (Parker et al. 1995; Brown 2003). Irrespective of bodyweight, furthermore, some girls perceive themselves as overweight more than others do (Ge et al. 2001). Finally, irrespective of actual weight and perceptions of overweight, girls' use of use weight control practices varies by race/ethnicity, although research on how they vary offers mixed results (Crago,

Shisslak and Estes 1996). In this study, we compare four categories of girls--Asian, Hispanic, White and African American—to explore how they resemble and differ from each, before and after taking account of other influences.

The focus of our analysis is *weight control practices and/or regimes*, what girls actually *do* in relation to controlling their bodyweight. If all “heavier” girls try to manage their weight similarly, a general process may be at work, for instance, with actual weight leading to a perception of being overweight, leading to adoption (or not) of particular regimes. If, however, girls adopt different regimes depending on their race/ethnic status, other dynamics are suggested. To test the robustness of any apparent race/ethnic effects, we take other influences into account. An ongoing debate in the research literature concerns the rival influences of social class and race/ethnicity relative to eating-related problems (Neumark-Sztainer, Croll, Story, Hannan, French and Perry 2002). Hesse-Biber (1996) suggests that White middle-class girls are pressured to be thin more than minority and/or lower status girls are and implies that social class and race/ethnicity compete with and/or mediate the effects of the other. We subject this possibility to a test.

Our study contributes to prior work on adolescent girls’ body project involvement in several ways. First, we describe how race/ethnicity correlates with bodyweight, perceptions about being overweight, and weight control practices and explore connections between these phenomena. Second, we remove the effects of family, peer, and school conditions (as well as maturation/age, immigrant status, and family structure) to assess the power of race/ethnicity to predict weight control regimes net of these influences. Third, we test the relative power of race/ethnicity and social class in accounting for body project dynamics. Fourth, we analyze sizeable subsamples of girls in

four race/ethnic statuses to see how their involvement in body project dynamics compares. Our use of a large, national random sample of teenage girls lets us complement prior work based on clinical, non-random samples that address severe eating disorders. Our sample of primarily healthy girls lets us assess the extent to which thinness concerns have penetrated popular cultural ideals and the identities of U. S. girls generally as well as within four race/ethnic groups.

Our paper is organized as follows. We review social constructionist and feminist theories of the body (Bordo 2003; Davis 1995; Moi 1999) and relate them to *body project identities and performances* associated with race/ethnicity, gender and social class (Howard 2000; Bettie 2003). Next, we describe our methods and data and present our results. At the end, we identify implications of our findings and specify avenues for further research.

Bodies, Identities, and a *Drive for Thinness*

We frame our analysis in terms of social constructionist and feminist theories of the body and identities (Lorber and Martin 2003; Schrock, Reid and Boyd 2005; see also Katzman and Lee 1997). Using this perspective, we suggest that a girl's deepest sense of herself and her assessment of her physical body are shaped by her identity group memberships, one of which is race/ethnicity (Stryker and Bruce 2000). Her *material body* is not just where her mind and feelings are *located*. Rather her body is culturally and socially located, concretely experienced, and actively interpreted, affecting all aspects of her life and experiences, including perceptions about bodyweight and inclination (or not) to control her weight. Through interacting with people, girls develop a conception of themselves in relation to their bodies including a sense of who they fundamentally are

(Howard and Hollander 1997; Howard 2000). A girl's body is intimately linked to her identity and her identity affects how she relates to, evaluates, and manages her body (Brown 2003). Our focus on a bodily condition (weight), bodily perceptions (evaluations), and bodily practices (aimed at controlling bodyweight) of girls in four race/ethnic statuses offers a window on how bodies and identities intersect and mutually construct each other. We interpret girls' self-judgments and participation in body project dynamics as evidence that their bodies are meaningful to them, to their sense of who they are; in short, to their identities.

DeBeauvoir (1961) views the "the body [as] a situation," an inextricable part of subjectivity. For deBeauvoir, subjectivity is embodied; bodies always and continuously influence one's perceptions, experiences, and actions as well as identity. Moi (1999:75) similarly views the body as concrete, historical, and experiential, not a thing "separate" from the mind or experience. Building on deBeauvoir's concept of the body as situation, Moi (1999:74) writes that:

. . . a situation is not an 'external' structure that imposes itself on the individual subject but [it is] rather an irreducible amalgam of the freedom of that subject and the conditions in which that freedom finds itself. The body as a situation is the concrete body experienced as meaningful and socially and historically situated.

Despite the body's material reality, a girl's views of, evaluation of, and treatment of her body are socially constructed. The meanings she (or others) attaches to her body—regarding weight, shape, size, attractiveness, height, skin color, hair—are constituted through social interactions and relations. Her deepest sense of who she is is shaped through negotiation with others in particular contexts (Howard 2000). Through her

membership and experiences, she learns to celebrate particular shapes and kinds of bodies and to value other shapes and kinds less so (Brush 2004). The features of bodies that members of her race/ethnic group value affect her perceptions about and evaluations of her own body and they become part of her identity. This is our central thesis.

Like everyone, adolescent girls have multiple identities that are constituted through multiple social contexts (or networks; see Stryker and Bruce 2000). A girl is not simply African American, a student, a member of the upper class, or a daughter; she is all of these things at once. Adolescent girls judge their physical bodies using standards that are valorized in their membership groups, not (only) in the wider society. In her study of working class girls, Bettie (2003) shows that race, gender, and class are not separate or independent identities. Friendship patterns and school engagement are *at once*, she finds, race/ethnic *and* gender *and* social class *performances*, that both reflect and construct girls' identities⁴. We contend that perceptions of overweight and the use (or rejection) of various weight control practices are similarly, *at once*, gender/race/ethnic and social class performances.

If a girl's identity groups value thinness, we suggest that she will do so as well. If they value light skin or straight hair, she will value light skin or straight hair (Brown 2003). We believe girls judge themselves and embrace the kind of body project that is valorized by their primary race/ethnic identity group. Experiences in/with this group foster feelings that she embodies or deviates from the bodily shapes, sizes, or other traits that are most admired (Warren et al. 2005). Possessing an "overweight identity" in a setting that valorizes thinness will encourage a girl to try to control her weight whereas

an identity that frames her body as “just right weight” will prompt resistance to this sort of activity (Lovejoy 2001).⁵

The *body project*, a concept suggested by Brumberg (1997) and developed by Bordo (2003), frames anorexia nervosa and bulimia as twentieth century equivalents to nineteenth century Victorian-era hysteria among young affluent women. Eating and weight-related problems are, in this view, girls’ responses to the trapped condition of experiencing weight gain while being subjected to cultural pressures to be thin. Girls cannot control the world of advertising, media, judgmental parents, or unforgiving peers but they can control their bodies, at least relative to weight. (Or at least they may believe they can.) Bordo (2003) views the sharp increase in eating disorders, particularly among white, higher status girls, as a reaction to cultural pressures to display a thin body, irrespective of genetic predisposition or eating and other body-related practices.

When popular culture tells women and girls to display a thin (or other shaped or appearing body) body, it encourages them to view their *bodies as a project that can be shaped by an effort of will*. Although growing girls are susceptible to this dynamic, grown women are too, as indicated by the explosive growth of liposuction surgeries, use of diet foods, weight-loss programs, and exercise clubs (Davis 1995). Viewing oneself as morally responsible for the shape or appearance of one’s body makes one more apt to embrace a body project (Bordo 2003) and girls who feel deficient relative to cultural ideals are vulnerable to this dynamic. If they perceive that their bodies violate the ideals of their identity group(s) *and* feel responsible for the condition, they may take steps to alter their bodies. In short, they may take up a body project aimed at controlling weight.

We know that girls embrace a variety of body projects. Eisenberg, Neumark-Sztainer, Story and Perry (2005) report, for example, that girls who are more cognitively aware of the “thin body ideal” internalize it more and girls who internalize it more develop “body dissatisfaction” more (cf. Neumark-Sztainer et al. 2005). Awareness of a thin body ideal is one step along a path toward a concern with thinness, at least for some girls. Girls who believe a particular ideal applies to themselves and that they are responsible for the shape, size or other features of their bodies are more apt to embrace the body project agenda (Brumberg 1997). Girls whose identity groups value thinness and who believe they are overweight are more likely to adopt practices—weight control practices--aimed at reducing or maintaining their weight, we suggest.⁶ Prior research leads us to expect that White and, to a lesser extent, Asian girls will invest more in controlling their bodyweight than will African American and/or Hispanic girls.

Drive for Thinness: Three Aspects

We analyze three aspects of a drive for thinness. By *perception of overweight*, we mean a girl’s assessment of her bodyweight relative to the ideals she perceives or has internalized. Cash and Hicks (1990) found that girls of “normal” (or “objectively” acceptable relative to height) weight who perceived themselves as overweight were more likely to exhibit body dissatisfaction and disordered eating behaviors, than were other girls. As noted, Ge et al. (2001) found in a prospective study that girls who perceive themselves as overweight at “time one” have lower self-esteem and more depressive and somatic symptoms in the following year, concluding that simply perceiving themselves as overweight fostered poorer psychological functioning in girls of all race/ethnic statuses, although the effects were stronger for White girls.

Actual weight. Actual bodyweight is weight adjusted for height which is usually measured by the Body Mass Index (BMI). Not surprisingly, a higher BMI is positively associated with a perception of being overweight in adolescent girls (Ge et al 2001, Cash and Hicks 1990). Eisenberg et al. (2005) found that (objectively) overweight girls are more likely to engage in unhealthy weight control practices than are moderately overweight, average weight, or underweight girls and according to Dohnt and Tiggemann (2005: 111), greater bodyweight fosters greater body dissatisfaction. Juda et al. (2004:204) found that women with a higher BMI diet more extensively than other women do. Such results suggest that girls who weigh more will perceive themselves as overweight more and thus embrace body project activities more.⁷

Weight control practices & regimes. Actions taken by someone to reduce or maintain bodyweight are *weight control practices* or *regimes*. These practices (grouped into four regimes; Tables 1 and 3 and Appendix Table A) range from more normatively approved exercise to the slightly less normative practice of dieting to the more deviant practices of taking pills, vomiting, and using laxatives. Eisenberg et al. (2005) call the latter “unhealthy weight-control behaviors”⁸ and Sisco, Taylor and Martin (2006) view them as socially deviant. While dieting is more normative than the latter practices are, research shows that dieting is ineffective and may actually prompt *weight gain* in adolescent girls and boys over time (see Shisslak, Mays, Crago, Jirsak, Taitano, and Cagno 2006). A study of exercisers found that those who dieted were less favorably oriented to exercise than were non-dieters and people with high “depressed mood scores” *avored dieting over exercise* as a “self-determining” activity (Lane, Lane and Matheson 2005). Lane, Lane and Matheson (2005) say that dieting may indicate potentially serious

eating problems and Butryn and Wadden (2005:285) conclude that dieting “. . . may precipitate [emphasis ours] eating disorders and related complications.” The role of dieting in fostering eating-related problems in teenage girls is worrisome. Engagement with the body project starts early, according to Dohnt and Tiggemann (2005:103), “. . . body dissatisfaction in girls first emerges . . . between the ages of 5 and 7 years and appears to be a function of shared peer norms for thinness.”⁹ While dissatisfaction need not prompt the adoption of weight control practices, for some it does. Are girls in some race/ethnic statuses more prone than others to adopt them?

In adopting or rejecting body project practices, we view adolescent girls as agentic rather than passive responders to identity group values and dynamics. Exercising, dieting, taking pills and vomiting are not automatic responses to pressures associated with one’s gender, social class, and race/ethnic identities.¹⁰ Rather, they are signs of having interpreted, negotiated, and decided to embrace or reject particular body project regimes. It is possible that a girl will claim to use (or deny using) particular practices even though she does not (or does). For example, a middle-class White girl may feel she must *say* she exercises to control her bodyweight even if she does not while a working-class White girl may feel no pressure to make this claim, even if she does exercise for that purpose. Far more girls in our sample admit to using weight control practices than view themselves as overweight, suggesting that claiming to do the practices, for instance exercise or exercise-plus-dieting, is normative for some girls (Appendix Table A). Saying she exercises to control her weight may allow a White girl to say what is expected of her whereas denying that she exercises may allow an African American girl to say what is

expected of her (cf. Lovejoy 2001), possibilities that should be kept in mind as we proceed.

Drive for Thinness and Race/Ethnicity

Extensive research documents the association of race/ethnicity with a drive for thinness. Although African-American women and girls are heavier than White women and girls are, they do not hold themselves to similar thinness standards (Thompson 1992). Crago, Shisslak and Estes (1996) and Akan and Grilo (1995) find that Caucasian women are more concerned with body image and eating issues than African American or Asian-American women are, although Thompson (1992) and Bordo (1993) claim that the “cult of thinness” is spreading across race/ethnic lines, a pattern that is confirmed by some research. For instance, Haudek, Rorty, and Henker (1999) find Asian-American women are *more*, not less, concerned with thinness than White women are and Neumark-Sztainer et al. (2002) report similar findings for Hispanic, Native American and Asian (versus White) girls. Although African American girls are more obese, they have higher levels of body satisfaction and binge-eat less often than other minority girls do. Finally, some research shows no differences between White and African American women on body dissatisfaction assessments. Caldwell, Brownell, and Wilfley (1997) suggest that ostensible racial differences in eating disorder development are actually social class effects, a possibility we test among adolescent girls.

Perez and Joiner (2003) found that Black women embrace “higher ideal images” of body size (meaning approval of being heavier) and less often view themselves as overweight compared to White women. Yet, they found that all women, regardless of race/ethnicity, who perceived themselves as overweight “. . . endorse[d] more bulimic

symptoms than those who perceived themselves as underweight” (Perez and Joiner 2003:346). Internalizing thinness ideals thus seems to foster body dissatisfaction and dissatisfaction, in turn, fosters attempts to control weight, especially in Whites (Warren et al. 2005). According to Ge et al. (2001), the psychological well-being of Anglo and Hispanic girls is more negatively affected by being more physically mature than that of African American girls is and Anglo girls who perceive themselves as overweight show more negative psychological outcomes than do Hispanic or African American girls.¹¹ Results from Ge et al. (2001) on the impact over time of bodyweight issues on girls’ psychological well-being are based on the same sample of girls that we analyze here.

Drive for Thinness: Other Influences

Since other contexts, experiences, and bodily features (e.g., maturation or age) may influence a girl’s concern with thinness, we review research on these factors.

Parental/family support reflects a girl’s perception that her parents and/or family are caring and supportive of her. Girls who are emotionally closer to their families, and feel more supported by them, are insulated from conformity peer pressures and are more accepting of their bodies’ shape and size. Juda et al. (2004) found young women with caring and supportive families embraced body project ideals and practices less and those who received more support from families or romantic partners had less “diet symptomatology.” Other evidence confirms this pattern. Higher levels of family cohesion and communication (Leon, Fulkerson, Perry, and Dube 1994), higher parental caring and expectations (Neumark-Sztainer et al. 2000), and greater emotional support from family (Perkins, Luster and Jank 2002) protect adolescent girls from eating related problems.

[See also Leung, Schwartzman and Steiger (1996); Byely et al. (2000) and Fonseca et al. (2002)].¹²

Peer/school relations. Peers. Although the transition from childhood to adolescence amplifies the influence of peers, research on body project dynamics relative to peers is mixed (Lackovic-Grgin and Dekovic 1990; Bettie 2003; Gerner and Wilson 2005). Brown (2003) suggests that (more) popular girls are more vulnerable to body project pressures and Tiggemann (2001) reports that popular girls, with more extensive social networks, are more dissatisfied with their bodies and have more “disordered eating symptoms”.¹³ Eisenberg et al. (2005) found that girls whose friends used unhealthy weight control behaviors were twice as likely to use unhealthy weight control behaviors and Dohnt and Tiggemann (2005) found that girls whose peers disapproved of their bodies were more dissatisfied with themselves and more aware of dieting practices. In theorizing why “more social” girls embrace body project activities more, Striegel-Moore, Silberstein, and Rodin (1986:251) say, “...the wish to be popular and the pursuit of thinness may become synonymous in the mind of the teenage girl.”¹⁴ We anticipate that this pattern is primarily characteristic of White girls.

Schools. School norms, values, and practices affect students who attend them. If a school’s culture valorizes thinness for girls, girls who are more involved in school activities may be encouraged to embrace thinness ideals more. In this regard, Eisenberg et al (2005) found that girls in schools where more of her peers dieted were themselves more involved in unhealthy weight control behaviors.¹⁵ Concern with making good grades is positively associated with eating disorder symptoms in some girls (Levine et al. 1994; Hewitt, Flett and Ediger 1995). Striegel-Moore, Silberstein, and Rodin (1986)

found that schools foster competition among girls to be both attractive and academically successful, but Burckle et al. (1999) found eating disorder symptoms more prevalent only in girls concerned with appearance, not academic achievement.

Social class. As noted, some studies show that the drive for thinness varies by social class with middle to upper-middle class more invested in weight control practices. Striegel-Moore, Silberstein, and Rodin (1986) found that upper-class women are more exposed to thin beauty ideals and more approving of them. Hesse-Biber (1996) concludes that middle- and higher-status girls are particularly susceptible to a “cult of thinness.” Crago, Shisslak and Estes (1996) found that minorities with eating problems tended to hold “white, middle class values” and conclude that an internalization of thinness ideals prompted by social class status prompts even minority women to have weight control concerns. This finding suggests, in agreement with Bettie (2003), that race/ethnicity and class should not be ‘separated’ where identities and related performances are concerned. Joiner and Kashubeck (1996) fail to document social class effects on eating disorders. We compare the relative power of race/ethnicity and class, singularly and in combination, to account for body project involvement.

Maturation and age concern the degree to which a girl’s body reflects adult qualities like larger hips and breasts and overall size. Early maturation affects a girl’s relations with others (Thorne 1993) and her bodyweight perceptions and practices. Early maturing girls often develop a negative assessment of their bodies and adopt unhealthy eating practices (Hayward et al. 1997). Girls who mature earlier are unhappy about doing so, in part because boys “sexualize” girls who reach puberty early by calling them names, pointing out breast and hip growth, and publicly announcing their menstrual periods

(Thorne 1993). Research by Striegel-Moore, McMahon, Biro, Schreiber, Crawford, and Voorhees (2001) found that girls who mature earlier than their peers are at greater risk for developing poor body image and are more likely to diet than girls who reached maturation later than their peers, although their findings were not significant after controlling for BMI. Girls who mature before their classmates may believe they are overweight and thus try to control their bodyweight, even though they are merely progressing toward adulthood sooner.

Immigrant status refers to whether a girl was born in the U. S. or abroad to U. S.-citizen parents (versus other). Immigrant women exposed to U. S. cultural images of beauty for longer periods of time accept societal values about thin bodies more, increasing body dissatisfaction and concern with weight management (Chamorro and Flores-Ortiz 2000). Davis and Katman (1999) report a positive association between immigrant acculturation and disordered eating in young women, with higher degrees of acculturation predicting greater concerns about food, higher levels of bulimia, and greater preoccupation with thinness.

Family structure refers to whether a girl lives with two biological parents. Some research shows that children who reside with two biological parents are better adjusted, earn better grades, and have higher self-esteem than those residing in other contexts (Downey 1995). Such a family setting may insulate girls from a drive for thinness, net of other influences.

Data and Methods

Sample

Our data are from the National Longitudinal Study of Adolescent Health (Add Health), a nationally representative study of adolescents in grades 7 through 12 in the United States. The study used a multistage, stratified, school-based, cluster sampling design, including students from 80 public and private high schools, as well as students from one junior high or middle school feeding into each high school (Harris, Florey, Tabor, Bearman, Jones, and Udry 2003). Add Health involves multiple waves of data collection and several data collection components. This research utilizes data collected from In-Home interviews during Wave I (1994-1995) and selected data from the Wave I In-School Questionnaire and the Wave I Parental Questionnaire. The sample includes 7,272 adolescent girls who participated in both the In-School and In-Home interviews and had a completed Parental Questionnaire.

Measurement

Perceptions of Overweight, Actual Weight & Weight Control Practices

Perceptions of overweight. A girl's perception that she is overweight is measured by this question, "How do you think of yourself in terms of weight?" with response categories of very underweight, slightly underweight, about the right weight, slightly overweight, and very overweight. "Slightly overweight" or "very overweight" were coded 1, others as 0. Almost half of the girls (45 percent) saw themselves as slightly or very overweight. *Actual weight.* Actual weight is measured via the body mass index (BMI) according to the standard formula: Weight in pounds divided by the product of 703 times height in inches. The median BMI score in our sample is 21.5, slightly higher than the national median for girls aged 17 (the average age of our sample; see

<http://www.cdc.gov/growthcharts>).¹⁶ We treat the BMI as an objective indicator of weight relative to height.

Weight control practices (WCPs). Add Health measures body project practices with questions about attempts to control weight. If a girl said she was trying to lose or maintain weight, a series of queries about WCPs ensued. Respondents could choose up to six practices: exercise, dieting, diet pills, laxatives, vomiting, and “other” practices. Sixty-five percent of adolescent girls engaged in one or more of these practices to lose or maintain weight with the most common being exercise and dieting (Appendix Table A). We group these practices into four *regimes*. From the 2^6 or 64 possible combinations of WCPs (although only 28 unique combinations were reported), we identified four broad regimes that were most prevalent and also captured the substantively unique groupings of weight control practices. The regimes are: (1) exercise only ($n=3,332$), (2) diet only or diet+exercise ($n=1,722$), (3) use of diet pills, laxatives, or vomiting ($n=149$), and (4) other practices ($n=268$). For brevity, we refer to the second regime as *diet* or *dieting* although it includes girls who diet only or diet-plus-exercise. A fifth group consists of girls not currently attempting to maintain or lose weight ($n=1,801$).¹⁷

Race/ethnicity. Race/ethnicity is measured in five categories based on a girl’s responses to a question about her race/ethnic status. The dummy-variable categories are African American, Hispanic, Asian, “Other Race,” with non-Hispanic White serving as the reference category in the multivariate analysis.

Parental/family support. Parent/family support taps the quality of a girl’s relations with her mother, father, and family. Mother support was measured with series of questions about whether mother is perceived as warm and loving, caring, communicative,

and emotionally close with responses ranging from strongly disagree (coded 1) to strongly agree (coded 5). Items were averaged to produce an index, with a mean of 4.18 and a Cronbach's *alpha* reliability score of .84. Father support was tapped with the same five questions, resulting in a summary measure with a mean of 2.97 and an alpha of .84. (Respondents who reported no information for mother or father were assigned a value of 0 on mother or father support, respectively.¹⁸) Family support was measured by five items asking how much the girl thinks her parents care, how much she feels paid attention to and understood by her parents, whether she wants to leave home, and the fun she has with her family. Responses were not at all (1), very little (2), somewhat (3), quite a bit (4), and very much (5). (The question on leaving home was reverse-coded so a high score indicates a positive relationship.) The family support index is equal to the average response, with a mean of 3.96 and alpha of .76.

Peer/school relations. Peer relations were measured in terms of friendship. Friendship quality was measured by a question asking "How much do you think your friends care about you?" Responses were not at all (1), very little (2), somewhat (3), quite a bit (4), and very much (5). The mean was 4.40. Friendship ties were measured by items asking a girl to identify one male and one female friend at school (using Add Health friendship rosters).¹⁹ Most girls, 90 percent, had at least one friend. Girls who reported only one friend almost always reported a girlfriend, reflecting the gender segregation of school social spaces (Thorne 1993).

School engagement was measured in two ways--school activities and grade-point-average. School activities is the sum total of school-based activities or organizations to which a girl belonged, identified from a list of 33 choices. The mean number of activities

reported was just under two. Grade-point-average was measured as the average of self-reported grades in English, math, history and science. The mean GPA for girls in our sample was 2.92.

Social class. The social class standing of a girl's family was measured with five indicators: Family income, father's education, mother's education, father's occupation, and mother's occupation. Family income is reported in four categories: (1) less than \$15,000, (2) between \$16,000 and \$34,000, (3) between \$35,000 and \$59,000, and (4) \$60,000 or greater. (A fifth category represents respondents who did not know or refused to report, encompassing 22 percent of the sample). Father's education and mother's education are indicated by dichotomous measures contrasting college graduates with those who completed less education; about 20 percent of fathers and 23 percent of mothers completed college or more. Father's occupation and mother's occupation are measured dichotomously, contrasting parents employed in professional occupations with all others. Nineteen percent of mothers and 15 percent of fathers had professional occupations at the time of the survey.

*Maturation status*²⁰ is tapped by combining three questions on bodily curves, breast size, and overall physical development; girls had five options ranging from relatively underdeveloped (coded 1) to relatively overdeveloped (coded 5). Responses were averaged and dichotomized into two categories: Girls who say they are more physically mature than their peers and girls who do not. About a third saw themselves as more physically mature than their peers. *Age* is measured in years (from 13 to 21, with a mean of 17). *Immigrant status* is measured as U.S.-born (or born abroad to U. S.-citizen

parents) versus non-U. S. born, via a dummy variable. *Family structure* is coded as living with two biological parents versus other parental/adult/residential arrangements.

Analytic Approach

We present the results in three sections. The first offers descriptive data on actual weight, overweight perceptions, weight control practices and regimes for girls by race/ethnic status (Table 1). The second (Table 2) presents results for girls' perceptions of bodyweight predicted by actual bodyweight, race/ethnicity, and other predictors, using multinomial logistic regression. The third (Table 3) shows multinomial logistic regression results to assess how girls' race/ethnic status and other attributes and experiences affect the odds of engaging in particular WCP regimes. To adjust for the multistage, stratified, school-based, cluster sampling design, we estimate the models using the robust estimator of variance known as a Huber or White estimator in STATA. Differential sampling probabilities among individuals are controlled by using the Add Health Wave I grand sample weights in all estimation procedures (Chantala and Tabor 1999).

Results

Actual Weight, Weight Perceptions, Weight Control Practices & Regimes

Table 1 shows that girls' actual weight varies in accord with their race/ethnic group. Asian girls weigh least, followed by White girls, Hispanic girls, and last (or heaviest) African American girls. The largest difference is between Asian and African American girls. Table 1 also shows that nearly *half of all girls perceive themselves as overweight* and that a girl's overweight perception is, like her actual weight, associated with race/ethnicity. Asian American girls perceive themselves as overweight least

extensively, Hispanic girls most extensively. White girls are closer to Asian girls and African American girls are closer to Hispanic girls. Asian American and White girls have lower actual weight *and* lower rates of overweight perceptions compared to African American girls who have the highest actual weight yet perceive themselves as overweight less extensively than do Hispanic girls. These variations in actual weight and perceptions about weight suggest that a girl's interpretation of her physical body reflects, at least in part, her race/ethnic group status.

Table 1—here

Table 1 also shows variations by race/ethnicity on girls' use of weight control practices. Fully 75 percent of all girls report using one or more practices to lose or maintain their bodyweight. While the large majority use the normative practices of exercise and/or dieting plus exercise, two percent use the deviant practices of diet pills/laxatives/vomiting and an additional four percent use "other" means such as smoking cigarettes and skipping meals (Appendix Table A shows detailed WCPs). African American girls again stand out. They report fewer weight control practices than do White or Asian girls. Thirty percent of African American girls reject the drive for thinness completely, a significantly higher percentage than is true for Asian American, White, or Hispanic girls (with 22, 23.5, and 24.6 percent, respectively, reporting no weight control practices). African American girls are significantly less likely than all other girls to exercise in order to control their weight and significantly less likely than White girls to diet.

Table 1 shows the four weight control regimes by race/ethnic status (the percentages for "used no weight control practices" are shown again for comparison

purposes). Girls in different race/ethnic groups used varying regimes, with the greatest difference between African American and other girls. To summarize, despite being heaviest, African American girls report *no* weight control practices more often and report exercising and dieting least. They are slightly more likely to use “other” weight control practices (Appendix Table A), although this difference is not significant.

With these descriptive patterns as background, we turn now to the multivariate evidence.

Analytic Results: Predicting Overweight Perceptions

Logistic regression results in Table 2 show girls’ overweight perceptions predicted by their race/ethnicity and other characteristics. Results in Column 1 reveal the robust influence of actual weight and the differences among race/ethnic groups. The second column reports interaction terms which show that differences in actual weight are more consequential for some girls than for others (non-significant interactions were omitted). Column 3 results let us assess whether race/ethnic effects shown in Models 1 and 2 are explained away by other influences.

Table 2—here

Not surprisingly, a girl’s overweight perceptions strongly reflect her actual weight (Models 1-3). In the first model, a one-unit increase in actual weight predicts a 56 percent increase in a girl’s odds of perceiving herself as overweight. Of central interest in this study, Model 1 (Table 2) shows African American girls much less likely than White girls to perceive themselves as overweight. Controlling for actual weight and other predictors, African American girls have less than half the odds of White girls of perceiving themselves as overweight. Furthermore, *Asian American girls are*

significantly more likely than White girls are to perceive themselves as overweight.

(Analyses not shown indicate that African American girls also have significantly lower odds of perceiving themselves as overweight than do Asian American or Hispanic girls.)

Maturation status significantly increases the odds a girl perceives herself as overweight, net of other influences; that is, more physically mature girls evaluate themselves as overweight more, a finding that agrees with other research showing early maturation as a negative experience (Hayward, Killen and Wilson 1997; Graber, Seeley, Brooks-Gunn, and Lewinsohn 2004; Thorne 1993).

Model 2 (Table 2) shows that actual weight has a significantly smaller impact on the bodyweight perceptions of African American and Hispanic than of White and Asian American girls. For Asian American and White girls, a one-unit increase in actual weight predicts an increase in the odds of seeing themselves as overweight by 69 percent, while the comparable percentage for Hispanic girls is 31 and for African American girls, 41.²¹ Weight gains among Asian American and White girls generate a greater increase in the odds they will see themselves as overweight, in comparison to African American and Hispanic girls. These associations are depicted in Figure 1.

Figure 1—here

White girls and, even more, Asian American girls are most susceptible to perceiving themselves as overweight (Figure 1). For these girls, the risk of perceiving themselves as overweight begins early along the range of actual weight and steeply increases as actual weight increases. In contrast, the risk for perceiving herself as overweight for a Hispanic girl increases at a far slower rate. African American girls are least likely to describe themselves as overweight and their risk of doing so starts to

increase at a higher level of actual weight and then increases less rapidly (compared to White and Asian American girls). All else being equal, adolescent girls' probability of seeing themselves as overweight becomes greater than 50/50 at a BMI score of 21.5 for Asian Americans, 22.3 for Whites, 23.2 for Hispanics, and 24.5 for African Americans. Among girls of average height (in this sample, 64 inches), these BMI scores correspond to 126, 130.5, 136, and 143 pounds, respectively. Thus, results in Model 2 show that a girl's identity relative to her bodyweight is strongly influenced by her race/ethnic group.

Model 3 (Table 2) shows that other predictors diminish differences between Asian American girls and White girls on perceptions of overweight. They no longer differ when family support is taken into account, mostly because Asian American girls report less family support than White girls do. Differences between African American or Hispanic girls versus White girls remain significant, however.

Regarding the relative influence of race/ethnicity and social class, two results are noteworthy. Girls whose mothers work in professional occupations view themselves as overweight *more often* (although the finding is nominally significant, $p < .10$) and girls in lower income families see themselves as overweight *less often*. These results agree with Hesse-Biber (1996) and Bordo (2003) who say higher-status girls are more susceptible to bodyweight concerns—the drive for thinness--than are lower-status girls. Yet, social class and race/ethnicity have independent effects indicating that both are part of the story. One does not eliminate the other.

Consistent with the literature, support from her family serves as protection by lowering the odds a girl sees herself as overweight. On the other hand, contrary to prior work, girls who participate in more school activities have equal or lower odds of

perceiving themselves as overweight. Friendship ties are unrelated to this perception. Finally, Table 2 shows that older girls view themselves as overweight less than younger girls do, a difference in odds of about 10 percent per year.

Analytical Results: Predicting Weight Control Regimes

Table 3 reports multinomial logistic regression results for four weight control regimes. We analyze the contrasts of exercise versus no WCP; dieting versus no WCP; using pills, laxatives, or vomiting versus no WCP; and using pills, laxatives, or vomiting versus dieting.²² As anticipated, heavier girls and girls who perceive themselves as overweight attempt to control their weight more assertively. Again, race/ethnicity shapes this dynamic.

Table 3—here

In Models 1 through 3 (Table 3), girls who weigh more and see themselves as overweight are more likely to exercise, to diet, and to use pills/laxatives/vomiting (than to do nothing). Perceptions of overweight are key to this dynamic. Net of other influences, girls who believe they are overweight are 5.6 times as likely to diet (versus do nothing) than girls who see themselves as at an appropriate weight or as underweight. A perception that she is overweight raises the stakes that a girl will use deviant weight control practices, furthermore. Girls who perceive themselves as overweight are more than 11 times as likely to use pills, laxatives, or vomiting to control their bodyweight (than do nothing; Model 4, Table 3) and girls who see themselves as overweight are twice as likely to use pills/laxatives/vomiting than to diet. These results underscore the significance of perceptions about being overweight for shaping girls' weight control

practices and the value of analyzing linkages between perceptions and weight control regimes.

Table 3 shows how race/ethnicity affects body project dynamics. African American girls are significantly less likely than White girls are to engage in the normative weight control practices of exercise or dieting (Models 1 and 2). African American girls are also significantly less likely to engage in these two more normative regimes than are Asian American or Hispanic girls. No other race/ethnic comparison on normative (versus none) weight control regimes is significant. When we examine the deviant practices of pills/vomiting/laxatives (Models 3 and 4), African American girls are not distinct, a result that we comment on in the discussion.

Table 3 shows that social class as well as parental/family support fail to predict a girl's adoption of a weight control regime. (Family support is negatively related to the risk of using extreme weight control practices but the associations are nominally significant, $p < .10$.) However, Table 3 shows a significant influence of peers and school activities on the odds of using normative weight control practices. Having more friends, being more involved in school activities, and making better grades increase the odds a girl will try to control her weight through exercise and dieting. Irrespective of actual weight or perceptions of overweight, girls who have more and stronger ties to peers and who engage in school activities more also use normative weight management practices more. However, having more friends is not associated with deviant weight control practices—that is, pills, laxatives, and vomiting (Models 3 and 4) and more engagement in school activities actually decreases the odds a girl will use pills, laxatives, or vomiting (versus diet). These results suggest that greater embeddedness in teen friendships and

school activities prompts teenage girls to embrace a body project aimed at thinness, at least in its normative forms of exercise and/or dieting.

Four additional concepts influence adolescent girls' use of deviant weight control practices (Table 3, Models 3 and 4). Being more physically mature is associated with a greater risk of using pills, laxatives, or vomiting (as opposed to using no weight control practices) and immigrant girls are less likely than U.S. born adolescents to adopt deviant weight control regimes (although there is no difference on exercise or dieting; Models 1 and 2). Being less assimilated to U. S. teen culture appears to protect girls from involvement in extreme body project dynamics. Finally, age is weakly associated with the use weight control regimes; that is, older girls use dieting (versus none) and pills/laxatives/vomiting (versus none) more than younger girls do. This result differs from those on age and perceptions, which showed older girls less likely to view themselves as overweight. Girls from two-biological parent families are at *significantly greater risk* of using an extreme weight control regime (versus do nothing), a puzzling finding that suggests that extreme methods of weight control may stem from other influences than those analyzed here. Thompson (1994) suggests as much in her ethnographic study of adult women with severe eating/body-related problems.

Discussion and Conclusions

Does a girl's race/ethnic identity affect her involvement in a *drive for thinness*? Our conclusion is yes. Girls' perceptions about being overweight and participation in weight control regimes vary according to their race/ethnic group. Our findings confirm that a girl's race/ethnicity affects the meanings she attaches to her body and the obligation she feels to control her bodyweight. In perceiving herself as overweight when

she is not and/or adopting (or eschewing) weight control regimes, she performs an identity that, we believe, reflects her race/ethnic status and interactions. Of course, she simultaneously performs a gender identity and social class identity (Bettie 2003). Girls from lower income families are, we find, *less* likely to perceive themselves as overweight (net of actual weight and so forth) and girls with professional mothers are *more* likely to perceive themselves as overweight (relative to girls whose mothers are not professionals, net of actual weight and so on). Although these effects are weak, they confirm prior work showing that higher status girls are more susceptible to body project pressures, even within a particular race/ethnic group (Caldwell, Brownell and Wifley 1997; Rogers, Resnick, Mitchell and Blum 1997). They also suggest the importance of attending to, at once, gender, race/ethnicity and social class in accounting for body project dynamics.

The majority of girls in our national sample are concerned with a drive for thinness. Almost half view themselves as overweight and 75 percent engage in at least one practice aimed at controlling their weight. The modal body project activity in our sample is exercise. Fully 45 percent of the girls exercised (only) while an additional 16 percent exercised and dieted. And, yet, our findings show a consistent pattern of distinctiveness for African American girls, among whom thinness and concerns about thinness are less common. These girls weigh more than Asian, Hispanic, or White girls, but at any given weight they are less likely to perceive themselves as overweight than Asian, Hispanic, or White girls. Furthermore, African American girls engage in practices aimed at controlling their weight *less extensively than other girls do* and are *least* invested in the weight control regime of dieting. Our question regarding whether any apparent race/ethnic effects are sustained in light of family and peer/school effects (and

maturity status/age, immigrant status, and family structure) is answered in the affirmative. African American girls evaluate and experience their bodies distinctively and Asian and White girls also stand out in several respects.

Explanations for African American girls' uniqueness may involve a cultural legacy, cultural resistance, both factors, or other dynamics. Stompler and Padavic (1997:271-2) advance a cultural legacy explanation for why African American and White women experience fraternity "Little Sister" programs differently. They found that African American and White girls see themselves differently in relation to boys, partly due to a legacy of racial oppression and underemployment of African American men (Jones 1985). Their cultural legacy encourages them to be self-reliant and to valorize the image of a strong, outspoken African American woman (Collins 2004), thus young African American women less often view their future as tied to their relationship with a husband (cf. Collins 1991). Perhaps the conception of a strong African American woman suggests a physically large body (cf. Perez and Joiner 2003). Latner, Stunkard and Wilson (2005) found, for instance, that African American women like obese people more than African American men, White men, or White women do and concluded that "an understanding of the factors that limit the stigma of obesity among African American women" (p. 1226) would be beneficial.

Such cultural referents may place African American girls at less risk for negative perceptions of bodyweight, especially if a larger body is defined as conferring interpersonal power rather than a liability in relating to men. A cultural message of self-reliance and strength for African American women stands in contrast to mainstream culture that encourages White girls and women to secure their well-being through

intimate relationships with men (Holland and Eisenhart 1990; Giordano, Longmore and Manning 2006). Hebl and Turchin (2005) found that African American men “have a larger acceptable standard for their views of [the physical size of] women than do White men,” meaning they stigmatize heavy bodyweight less (p. 267). If African American men and women are more accepting of larger physical bodies, this condition may influence adolescent girls to be more accepting of heavier bodies themselves.

Another perspective on the cultural experiences of African Americans frames large bodies as a form of resistance to mainstream White culture (Jones 1985). Lovejoy (2001) views this explanation as a possibility among adult African American women. We cannot determine whether African American girls’ perceptions and actions are driven by cultural legacy, resistance to White culture, or other factors but some support for the first perspective is offered by Add Health data showing African American girls as *least* likely to report wanting a romantic relationship in the next year and *most likely* to view their chances of being married by age 25 as low (results not shown).

In addition to race/ethnic status, a girl’s actual weight and perception that she is overweight affect her body project efforts, although *only the latter predicts all four body project regimes* (Table 3). Girls who view themselves as overweight engage more in all four weight control regimes, especially dieting (versus nothing) and they also use pills/laxatives/vomiting (versus nothing) more. Girls who perceive themselves as overweight are ten times more likely to use the deviant practices of pills/laxatives/vomiting (versus nothing) and girls who view themselves as overweight are twice as likely to use pills/laxatives/vomiting (versus dieting). A girl’s perceptions of her body influence her attempts to craft it by engaging in a body project, supporting prior

work showing that girls who *internalize* thinness ideals take this step more often (Moradi, Dirks and Matteson 2005).

Race/ethnicity predicts weight control regimes directly only for African American versus White girls (in the use of exercise and/or dieting versus nothing). We found no other race/ethnic difference net of other predictors, although we hasten to note that race/ethnicity influenced regime adoption indirectly through its influence on girls' perceptions about being overweight. Even with perceptions out of the picture, however, African American girls are less apt than White girls to exercise or diet.²³

Girls who are more mature physically or who are older report greater involvement in dieting (versus nothing) and the use of the deviant practices of pills/laxatives/vomiting (versus nothing). These results alert us to the perils of early maturation for girls and to the increasing pressure, with age, to participate in weight control regimes. Surprising to us, girls in two-parent, biological families adopted deviant practices more, a result for which we have no explanation. Finally, immigrant girls are less likely than other girls, net of other influences, to adopt deviant weight control regimes (versus do nothing or dieting). As anticipated, this finding suggests that lower levels of acculturation to mainstream U. S. society protect immigrant girls from body project pressures toward thinness. The race/ethnic identities they will develop as shaped by mainstream U. S. culture have not yet fully congealed.

In closing, we reiterate our claim that girls' bodies are not only physical. They are also social constructions, aspects of identity. Pressures to bring one's physical body into line with hegemonic ideals about thinness may be nearly impossible for some girls to resist, especially Asian and White girls. African American girls appear to resist more

successfully. Lovejoy (2001) cautions, however, that overweight African American women may unwittingly court heart disease, blood pressure, and diabetes problems. While research on eating issues/bodyweight among White and Asian girls has focused on anorexia and bulimia, that on African American girls has, until recently, ignored the effects that Lovejoy identifies. Of course, the dramatic increase in obesity in women and girls (and men and boys) in all race/ethnic groups means this neglect will probably not continue. If being overweight prompts a stigmatized identity with associated reduced health or life-chance effects, research on these issues should increase. Taking identities associated with race/ethnicity, gender, social class into account will enhance the relevance and utility of this effort.

Notes

1. We use the Add Health data set as do Ge et al. (2001) and we employ some of the same concepts, e.g., actual weight (BMI), perceptions of overweight, and race/ethnicity. They studied both boys and girls, however, which we do not and we address weight control practices which they do not. Our study adds to theirs by analyzing connections between actual body weight, perceptions of overweight, and weight control practices and asking how families, peers, and school engagement affect girls' body project involvement.
2. Being fat is a *stigma* in certain segments of society, particularly in white middle-class circles and particularly for women and girls (Moore 2005).
3. An increasing proportion of U. S. youth are becoming overweight and this pattern is associated with race/ethnicity, that is, African American and Hispanic youth are

becoming overweight/obese at a higher rate than are White youth (Strauss and Pollack 2001).

4. Drawing on Butler (1990) and Bourdieu (1984), Bettie (2003:54) argues that a girl's identities are created through discourse, by which she means "public meaning systems." People "deploy these discourses to constitute . . . identities from a limited range of options" (p. 54). Discourses are more than just "language in practice"; they are ". . . constellations of knowledge, together with institutionalized social practices" (p. 54). Girls actively construct their identities by invoking particular discourses within a set of "institutionalized forces and constraints" (p. 54). They "perform," or create, identities through their peer (and other social) relations, in dynamics involving friendship formation, curriculum choices (e.g., working for good grades or not), and extracurricular participation. Identity is, in short, shaped by a girl's family and peer/school relations (Bettie 2003:50; also Stryker and Burke 2000).

5. Currie (1999) found that girls who read magazines with skinny girls depicted as models were more likely, even as young as thirteen, than girls who did not read them to believe they *should* be skinny or at least thin. Thompson et al. (1999) say societal standards of beauty that emphasize thinness are internalized by most U. S. women and girls. Yet, Warren et al. (2005) found internalization to vary by race/ethnicity; internalized images of thinness increase body dissatisfaction in White girls more than in Mexican and Spanish (from Spain) girls, they report.

6. A number of studies find that women who like their bodies less show higher rates of eating disorders (Joiner and Kashubeck 1996; Geller et al. 1998).

7. While opinions vary on the effects of actual versus perceived weight on various outcomes, Rierdan and Koff (1997:621) argue that “. . . the psychological variable of body image, not the biological variable of body fat, . . . is significantly predictive of levels of depressive symptomatology.” This study implies that perceptions are more influential than actual weight. For this reason, actual weight must be accounted for when analyzing the effects of perceptions on body project practices.
8. Their list of unhealthy weight control practices includes the ones we study plus fasting, eating very little food, using a food substitute (power/drink), skipping meals, and smoking more cigarettes.
9. Eating disorders traditionally mean clinically diagnosed eating problems such as anorexia and bulimia. Polivy and Herman (2002:188) list the criteria of anorexia as “. . . maintaining a body weight at a level less than 85% of normal weight for age and height, an intense fear of fatness, disturbed experience of one’s body weight or shape, and amenorrhea for at least three consecutive menstrual cycles.” They define bulimia as including episodes of binge eating characterized by lack of control during the incident and compensatory behaviors afterwards, such as vomiting or fasting; such behaviors must occur twice a week for at least three months to qualify as bulimia.
10. Giordano, Longmore and Manning (2006) say teenage girls are far more *agentic* in their romantic relationships than is generally assumed.
11. Ge et al. (2001) predict adolescents’ psychosocial status using bodyweight and maturation perceptions whereas we predict *weight control practices* using bodyweight, perceptions about bodyweight, and a number of contextual conditions.

12. Other studies document the effects of other family influences. For instance, parents who exhibit eating disordered behaviors themselves (Pike and Rodin 1991) or frequently comment on their child's weight or appearance (Smolak, Levine and Schermer 1999) are more likely to raise an adolescent with an eating disorder. These effects are more salient for adolescent girls than boys, moreover (Smolak, Levine and Schermer 1999). We have no data on these concepts.

13. Girls who are closer to their peers are more susceptible to the body project, according to Hesse-Biber (1996), who found that sorority women judged themselves as falling short of the "thinness ideal" more than non-Greek women did. Crandall (1988) found that a sorority sister's binge eating practices were positively predicted by the binge eating level of her friends, suggesting that interactions with peers influence young women to take up the body project.

14. In contrast to these results, Paxton et al. (1999:260) failed to find that higher levels of friend support or acceptance by friends and peers fostered body image problems. They concluded that greater involvement with friends is *not* associated with dietary restraint or the use of extreme weight loss behaviors. Fonseca et al. (2002) found that connectedness to friends was a *protective* factor against extreme dieting behaviors for boys but not girls.

15. Schieman and Turner (2001) found that women who feel more socially supported suffer more, not less, from depression. School-related norms may increase participation in other risky behaviors in adolescents such as binge drinking and smoking.

16. BMI is correlated with body fat and a greater risk for obesity, cardiovascular disease, and high blood pressure in adults (CDC 2005).

17. The dependent variable is restricted to the behaviors of adolescents who report they are attempting to lose/maintain their weight. For example, girls who exercise for reasons other than weight control are classified as “not engaging in WCPs.” We ruled out more elaborate categorizations of WCPs on conceptual and empirical grounds using post-estimation Wald tests that determine if pairs of categories on the dependent variable are “indistinguishable” (Long and Freese 2003: 203-6).
18. Preliminary analyses included dummy variables indicating non-response on the mother support and father support items. The coefficients for these dummy variables were never significant and the final models exclude these non-response indicators.
19. A total count of friends would be a better measure of friendship ties but these data are not available for the full sample. Add Health identified up to five male and five female friends but for only one-third of the original sample.
20. Ge et al. 2001 call this pubertal status.
21. How these odds ratios were derived is not shown in Table 2. The odds ratio for African American girls equals the product of the coefficient for BMI and the coefficient for the interaction term for African Americans. The odds ratio for Hispanics is based on the same calculation.
22. We report no contrasts involving the “Other practice” category of weight control practices because these contrasts contained few significant predictors (perhaps because of the heterogeneous and unspecified nature of the activities).
23. Moradi, Dirks, and Matteson (2005:427) find that African American girls have fewer “eating disorder-related attitudes and behaviors” than White girls. Gilbert makes a similar claim about African American versus White adult women (2003).

References

- Abrams, K. K., L. R. Allen, and J. J. Gray. 1993. "Disordered Eating Attitudes and Behaviors, Psychological Adjustment, and Ethnic Identity: A Comparison of Black and White Female College Students." *International Journal of Eating Disorders* 14:49-57.
- Akan, Gloria E. and Carlos M. Grilo. 1995. "Sociocultural Influences on Eating Attitudes and Behaviors, Body Image, and Psychological Functioning: A Comparison of African-American, Asian-American, and Caucasian College Women." *International Journal of Eating Disorders* 18(2):181-187.
- Allan, J. D., K. Mayo, and Y. Michel. 1993. "Body Size Values of White and Black Women." *Research in Nursing and Health* 16:323-333.
- Bettie, Julie. 2003. *Women without Class: Girls, Race and Identity*. Berkeley: University of California Press.
- Bordo, Susan. 2003. *Unbearable Weight: Feminism, Western Culture, and the Body*. Tenth Anniversary Edition. Berkeley: University of California Press.
- Bourdieu, Pierre. 1984. *Distinction: A Social Critique of the Judgment of Taste*. Cambridge: Harvard University Press.
- Brown, Lyn Mikel. 2003. *Girl Fighting: Betrayal and Rejection Among Girls*. New York: New York University Press.
- Brumberg, Joan Jacobs. 1997. *The Body Project: An Intimate History of American Girls*. New York: Random House.
- Burckle, Michelle A., Richard M. Ryckman, Joel A. Gold, Bill Thornton and Roberta J. Audesse. 1999. "Forms of Competitive Attitude and Achievement Orientation in Relation to Disordered Eating." *Sex Roles* 40: 853-870.
- Butler, Judith. 1990. *Gender Trouble: Feminism and the Subversion of Identity*. New York: Routledge.
- Butryn, M. L. and T. A. Wadden. 2005. "Treatment of Overweight Children and Adolescents: Does Dieting Increase the Risk of Eating Disorders?" *International Journal of Eating Disorders* 37(4):285-293.
- Byely, Lorissa, Andrea Bastiani Archibald, Julia Graber, and Jeanne Brooks-Gunn. 2000. "A Prospective Study of Familial and Social Influences on Girls' Body Image and Dieting." *International Journal of Eating Disorders* 28:155-164.

- Cahill, Spencer. 1986. "Language Practices and Self-Definition: The Case of Gender Identity Acquisition." *The Sociological Quarterly* 27 (3):295-311.
- Caldwell, Melissa B, Kelly D. Brownell, and Denise E. Wilfley. 1997. "Relationship of Weight, Body Dissatisfaction, and Self-Esteem in African American and White Female Dieters." *International Journal of Eating Disorders* 22:127-130.
- Cash, Thomas F. and Karen L. Hicks. 1990. "Being Fat versus Thinking Fat: Relationships with Body Image, Eating Behaviors, and Well-Being." *Cognitive Therapy and Research* 14(3):327-341.
- Casper, R. C. and D. Offer. 1990. "Weight and Dieting Concerns in Adolescents: Fashion or Symptom?" *Pediatrics* 86:384-390.
- Centers for Disease Control (CDC). 2005. "BMI—Body Mass Index." Webpage accessed on June 29, 2005 at <http://www.cdc.gov/nccdphp/dnpa/bmi/index.htm>.
- Chamorro, R. and Y. Flores-Ortiz. 2000. "Acculturation and Disordered Eating Patterns Among Mexican American Women." *International Journal of Eating Disorders* 28:125-129.
- Chantala, Kim, and Joyce Tabor. 1999. "Strategies to Perform a Design-Based Analysis Using the Add Health Data." Webpage accessed on June 29, 2005 at <http://www.cpc.unc.edu/projects/addhealth/files/weight1.pdf>.
- Collins, Patricia Hill. 1991. "The Meaning of Motherhood in Black Culture and Black Mother-Daughter Relationships." Pp. 42-60 in Patricia Bell-Scott, Beverly Guy-Sheftall, Jacqueline Jones Royster, Janet Sims-Wood, Miriam DeCosta-Willis, and Lucille P. Fultz (eds.) *Double Stitch: Black Women Write About Mothers and Daughters*. New York: Harper.
- _____. 2004. *Black Sexual Politics: African Americans, Gender, and the New Racism*. New York & London: Routledge.
- Crago, Marjorie, Catherine M. Shisslak and Linda S. Estes. 1996. "Eating Disturbances Among American Minority Groups: A Review." *International Journal of Eating Disorders* 19(3):239-248.
- Crandall, C.S. 1988. "Social Contagion of Binge Eating." *Journal of Personality and Social Psychology* 55(4): 588-598.
- Currie, Dawn. 1999. *Girl Talk: Adolescent Magazines and Their Readers*. University of Toronto Press.

- Davis, C. and M. Katzman. 1999. "Perfection as Acculturation: Psychological Correlates of Eating Problems in Chinese Male and Female Students Living in the United States." *International Journal of Eating Disorders* 25: 65-70.
- Davis, Kathy. 1995. *Reshaping the Female Body: The Dilemma of Cosmetic Surgery*. New York and London: Routledge.
- DeBeauvoir, Simone. 1961. *The Second Sex*. New York: Bantam.
- Dohnt, Hayley K and Marika Tiggemann. 2005. "Peer Influences on Body Dissatisfaction and Dieting Awareness in Young Girls." *British Journal of Developmental Psychology* 23:103-116.
- Downey, Douglas B. 1995. "Understanding Academic-Achievement Among Children in Stepfamilies: The Role of Parental Resources, Sex of Stepparent, and Sex of Child." *Social Forces* 73(3):875-94.
- Eisenberg, Marla E., Dianne Neumark-Sztainer, Mary Story and Cheryl Perry. 2005. "The Role of Social Norms and Friends' Influences on Unhealthy Weight-Control Behaviors among Adolescent Girls." *Social Science and Medicine* 60(6):1165-1173.
- Fonseca, Helena, Marjorie Ireland and Michael D. Resnick. 2002. "Familial Correlates of Extreme Weight Control Behaviors among Adolescents." *International Journal of Eating Disorders* 32(4): 441-448.
- Friestad, Christine and Jostein Rise. 2004. "A Longitudinal Study of the Relationship Between Body Image, Self-Esteem and Dieting Among 15-21 Year Olds in Norway." *European Eating Disorders Review* 12: 247-255.
- Ge, Xiaojia, Glen H. Elder Jr, Mark Regnerus, and Christine Cox. 2001. "Pubertal Transitions, Perceptions of Being Overweight, and Adolescents' Psychological Maladjustment: Gender and Ethnic Differences." *Social Psychology Quarterly* 64(4):363-375.
- Geller, Josie, Charlotte Johnston, Kellianne Madsen, Elliot M. Goldner, Ronald A. Remick, and C. Laird Birmingham. 1998. "Shape- and Weight-Based Self-Esteem and the Eating Disorders." *International Journal of Eating Disorders* 24 (3): 285-298.
- Gerner, B. and P. H. Wilson. 2005. "The Relationship between Friendship Factors and Adolescent Girls' Body Image Concern, Body Dissatisfaction, and Restrained Eating." *International Journal of Eating Disorders* 37(4):313-320.
- Gilbert, S. C. 2003. "Eating Disorders in Women of Color." *Clinical Psychology: Science and Practice* 10:444-455.

- Giordano, Peggy C., Monica A. Longmore, and Wendy D. Manning. 2006. "Gender and the Meanings of Adolescent Romantic Relationships: A Focus on Boys." *American Sociological Review* 71(2): 260-287.
- Graber, Julia A., John R Seeley, Jeanne Brooks-Gunn, Peter M Lewinsohn. 2004. "Is Pubertal Timing Associated With Psychopathology in Young Adulthood." *Journal of the American Academy of Child & Adolescent Psychiatry* 43(6):718-726.
- Harris, Kathleen, Francesca Florey, Joyce Tabor, Peter Bearman, Jo Jones, and J. Richard Udry. 2003. The National Longitudinal Study of Adolescent Health: Research Design. Accessed 6/29/05 at <http://www.cpc.unc.edu/projects/addhealth/design>.
- Haudek, Catherine, Marcia Rorty, and Barbara Henker. 1999. "The Role of Ethnicity and Parental Bonding in the Eating and Weight Concerns of Asian-American and Caucasian College Women." *International Journal of Eating Disorders* 25: 425–433.
- Hayward, C., J. D. Killen, D. M. Wilson, L. D. Hammer, I. F. Litt, H. C. Kraemer, F. Haydel, A. Varady, and C. B. Taylor. 1997. "Psychiatric Risk Associated with Early Puberty in Adolescent Girls." *Journal of the American Academy of Child and Adolescent Psychiatry* 36(2): 255-262.
- Hebl, M. R. and J. M. Turchin. 2005. "The Stigma of Obesity: What about Men?" *Basic and Applied Social Psychology* 27 (3):267-275.
- Hesse-Biber, Sharlene. 1996. *Am I Thin Enough Yet? The Cult of Thinness and the Commercialization of Identity*. New York, Oxford University Press.
- Hewitt, Paul L., Gordon L. Flett and Evelyn Ediger. 1995. "Perfectionism Traits and Perfectionistic Self-Presentation in Eating Disorder Attitudes, Characteristics and Symptoms." *International Journal of Eating Disorders* 18(4):317-326.
- Holland, Dorothy A. and Margaret C. Eisenhart. 1990. *Educated in Romance: Women, Achievement and College Culture*. Chicago: University of Chicago Press.
- Howard, Judith A. 2000. "Social Psychology of Identities." *Annual Review of Sociology* 26: 367-393.
- Howard, Judith A. and Jocelyn Hollander. 1997. *Gendered Situations, Gendered Selves*. Thousand Oaks CA: Sage.
- Joiner, G., and S. Kashubek. 1996. "Acculturations, Body Image, Self-Esteem and Eating Disorder Symptomatology in Adolescent Mexican–American Women." *Psychology of Women Quarterly* 20:419–435.

- Jones, Jacqueline. 1985. *Labor of Love, Labor of Sorrow*. New York: Vintage Press.
- Juda, Myriam N., Lorne Campbell and Charles B. Crawford. 2004. "Dieting Symptomatology in Women and Perceptions of Social Support: An Evolutionary Approach." *Evolution and Human Behavior* 25:200-028.
- Katzman, M. and S. Lee. 1997. "Beyond Body Image: The Integration of Feminist and Transcultural Theories in Understanding of Self Starvation." *International Journal of Eating Disorders* 22: 385-394.
- Lackovic-Grgin, K. and M. Dekovic. 1990. "The Contribution of Significant Others to Adolescents' Self-Esteem." *Adolescence* 25:839-846.
- Lane, H. J., A. M. Lane and H. Matheson 2005. "Validity of the Eating Attitude Test Among Exercisers." *Journal of Sports Science and Medicine* 3(4):244-253.
- Latner, J. D., A. J. Stunkard, and G. T. Wilson. 2005. "Stigmatized Students: Age, Sex, and Ethnicity in the Stigmatization of Obesity." *Obesity Research* 13 (7):1226-1231.
- Leon, Gloria R, Jayne A. Fulkerson, Cheryl L. Perry, and Anita Dube. 1994. "Family Influences, School Behaviors, and Risk for the Later Development of an Eating Disorder." *Journal of Youth and Adolescence* 23(5):499-515.
- Leung, Freedom, Alex Schwartzman, and Howard Steiger. 1996. "Testing a Dual-Process Family Model in Understanding the Development of Eating Pathology: A Structural Equation Modeling Analysis." *International Journal of Eating Disorders* 20(4):367-375.
- Levine M. P., L. Smolak, A. F. Moodey, M. D. Shuman, and L. D. Hessen. 1994. "Normative Developmental Challenges and Dieting and Eating Disturbances in Middle School Girls." *International Journal of Eating Disorders* 15(1): 11-20.
- Long, J. Scott, and Jeremy Freese. 2003. *Regression Models for Categorical Dependent Variables Using Stata*. College Station, TX: Stata Press.
- Lorber, Judith and Patricia Yancey Martin. 2003. "The Socially Constructed Body: Insights from Feminist Theory," 215-231 in Peter Kivisto (Ed.), *Illuminating Social Life*. Pine Forge. 3rd ed.
- Lovejoy, Meg. 2001. "Disturbances in the Social Body: Differences in Body Image and Eating Problems among African American and White Women." *Gender & Society* 15(2):239-261.
- Moi, Toril. 1999. *What is a Woman?* New York: Oxford University Press.

- Moore, Judith. 2005. *Fat Girl: A True Story*. New York: Penguin Books.
- Moradi, Bonnie, Danielle Dirks, and Alicia V. Matteson. 2005. "Roles of Sexual Objectification Experiences and Internalization of Standards of Beauty in Eating Disorder Symptomatology: A Test and Extension of Objectification Theory." *Journal of Counseling Psychology* 52(3):420-428.
- Neumark-Sztainer, Dianne, Jillian Croll, Mary Story, Peter J. Hannan, Simone A. French and Cheryl Perry. 2002. "Ethnic/Racial Differences in Weight-Related Concerns and Behaviors among Adolescent Girls and Boys." *Journal of Psychosomatic Research* 53(3):963-974.
- Neumark-Sztainer, Dianne, Mary Story, Peter J. Hannan, Trish Beuhring, Michael D. Resnick. 2000. "Disordered Eating Among Adolescents: Associations with Sexual/Physical Abuse and Other Familial/Psychosocial Factors." *International Journal of Eating Disorders* 28:249-258.
- Neumark-Sztainer, Dianne, M. M. Wall, M. E. Eisenberg, and Mary Story. 2005. "Obesity and Eating Disorders in Older Adolescents: Does Early Dieting Make Things Better or Worse?" *Journal of Adolescent Health* 36(2):152-153.
- Parker, S., M. Nichter, M. Nichter, N. Vuckovic, C. Sims and C. Ritenbaugh. 1995. "Body-image and Weight Concerns among African-American and White Adolescent Females: Differences that Make a Difference." *Human Organization* 54(2):103-114.
- Paxton, Susan J., Helena K Schutz, Elanor H. Wertheim and Sharryn L. Muir. 1999. "Friendship Clique and Peer Influences on Body Image Concerns, Dietary Restraint, Extreme Weight-Loss Behaviors, and Binge Eating in Adolescent Girls." *Journal of Abnormal Psychology* 108(2):255-266.
- Perez, Marisol and Thomas E. Joiner. 2003. "Body Image Dissatisfaction and Disordered Eating in Black and White Women." *International Journal of Eating Disorders* 33:342-350.
- Perkins, Daniel F., Tom Luster and Wolfgang Jank. 2002. "Protective Factors, Physical Abuse, and Purging From Community-Wide Surveys of Female Adolescents." *Journal of Adolescent Research* 17(4):377-400.
- Pike, Kathleen M. and Judith Rodin. 1991. "Mothers, Daughters, and Disordered Eating." *Journal of Abnormal Psychology* 100:198-204.
- Polivy, J. and C. P. Herman. 2002. "Causes of Eating Disorders." *Annual Review of Psychology* 53: 187-213.

- Rierdan, Jill and Elissa Koff. 1997. "Weight, Weight-Related Aspects of Body Image and Depression in Early Adolescent Girls." *Adolescence* 32:615-624.
- Rogers, Lisa, Michael D. Resnick, James E. Mitchell, and Robert W. Blum. 1997. "The Relationship Between Socioeconomic Status and Eating Disordered Behaviors in a Community Sample of Adolescent Girls." *International Journal of Eating Disorders* 22:15-23.
- Rucker, C. E. and T. F. Cash. 1992. "Body Images, Body-Size Perceptions, and Eating Behaviors among African-American and White College Women." *International Journal of Eating Disorders* 12:291-299.
- Schieman, Scott and Heather A. Turner. 2001. "When Feeling other People's Pain Hurts: The Influence of Psychosocial Resources on the Association between Self-Reported Empathy and Depressive Symptoms." *Social Psychology Quarterly* 64(4):376-389.
- Schrock, Doug, Lori Reid, and Emily Boyd. 2005. "Transexuals' Embodiment of Womanhood." *Gender & Society* 19:317-335.
- Shisslak, Catherine M., Mary Z. Mays, Marjorie Crago, Jan K. Jirsak, Keolani Taitano, and Colleen Cagno. 2006. "Eating and Weight Control Behaviors Among Middle School Girls in Relationship to Body Weight and Ethnicity." *Journal of Adolescent Health* 38:631-633.
- Sischo, Lacey, John R. Taylor, and Patricia Yancey Martin. 2006. "Carrying the Weight of Self Derogation? Disordered Eating Practices as Deviant Behavior in Young Women." *Deviant Behavior* 27(1):1-30.
- Smolak, Linda, Michael P. Levine and Florence Schermer. 1999. "Parental Input and Weight Concerns among Elementary School Children." *International Journal of Eating Disorders* 25:263-271.
- Stompler, Mindy and Irene Padavic. 1997. "Sister Acts: Resisting Men's Domination in Black and White Fraternity Little Sister Programs." *Social Problems* 44: 257-275.
- Strauss, Richard S. and Harold Pollack. 2001. "Epidemic Increase in Childhood Overweight: 1986-1998." *Journal of the American Medical Association* 286 (22):2845-2848.
- Striegel-Moore, Ruth H., Lisa R. Silberstein, and Judith Rodin. 1986. "Toward an Understanding of Risk Factors for Bulimia." *American Psychologist* 41(3):246-263.

- Striegel-Moore, Ruth H., Robert P. McMahon, Frank M. Biro, George Schreiber, Patricia B. Crawford, and Carolyn Voorhees. 2001. "Exploring the Relationship Between Timing of Menarche and Eating Disorder Symptoms in Black and White Adolescent Girls." *International Journal of Eating Disorders* 30: 421-433.
- Stryker, Sheldon and Peter J. Burke. 2000. "The Past, Present, and Future of an Identity Theory." *Social Psychology Quarterly* 63 (4): 284-297
- Thompson, Becky W. 1994. *A Hunger so Wide and so Deep: American Women Speak out on Eating Problems*. Minneapolis: University of Minnesota Press.
- Thompson, J. K. 1992. "Body Image: Extent of Disturbance, Associated Features, Theoretical Models, Assessment Methodologies, Intervention Strategies, and a Proposal for a DSM-IV Diagnostic Category—Body Image Disorder." In M. Hersen, R.M. Eisler, and P.M. Miller (Eds.), *Progress in Behavior Modification* 28:3-54. Sycamore, IL: Sycamore Publishing Inc.
- Thompson, J. K., L. J. Heinberg, M. N. Altabe, and S. Tantleff-Dunn. 1999. *Exacting beauty: Theory, assessment and treatment of body image disturbance*. Washington, DC: American Psychological Association.
- Thorne, Barrie. 1993. *Gender Play: Girls and Boys in School*. New Brunswick: Rutgers University Press.
- Tiggemann, Marika. 2001. "The Impact of Adolescent Girls' Life Concerns and Leisure Activities on Body Dissatisfaction, Disordered Eating, and Self-Esteem." *Journal of Genetic Psychology* 162(2):133-142.
- Tiggemann, Marika, Maria Gardiner, and Amy Slater. 2000. "'I would rather be size 10 than have straight A's': A Focus Group Study of Adolescent Girls' Wish to be Thinner." *Journal of Adolescence* 23:645-659.
- Warren, Cortney S., David H. Gleaves, Antonio Cepeda-Benito, Maria del Carmen Fernandez, and Sonia Rodriguez-Ruiz. 2005. "Ethnicity as a Protective Factor Against Internalization of a Thin Ideal and Body Dissatisfaction." *International Journal of Eating Disorders* 37:241-249.

Figure 1. Overweight Perception by BMI and Race/Ethnicity
National Longitudinal Survey of Adolescent Health, Wave I

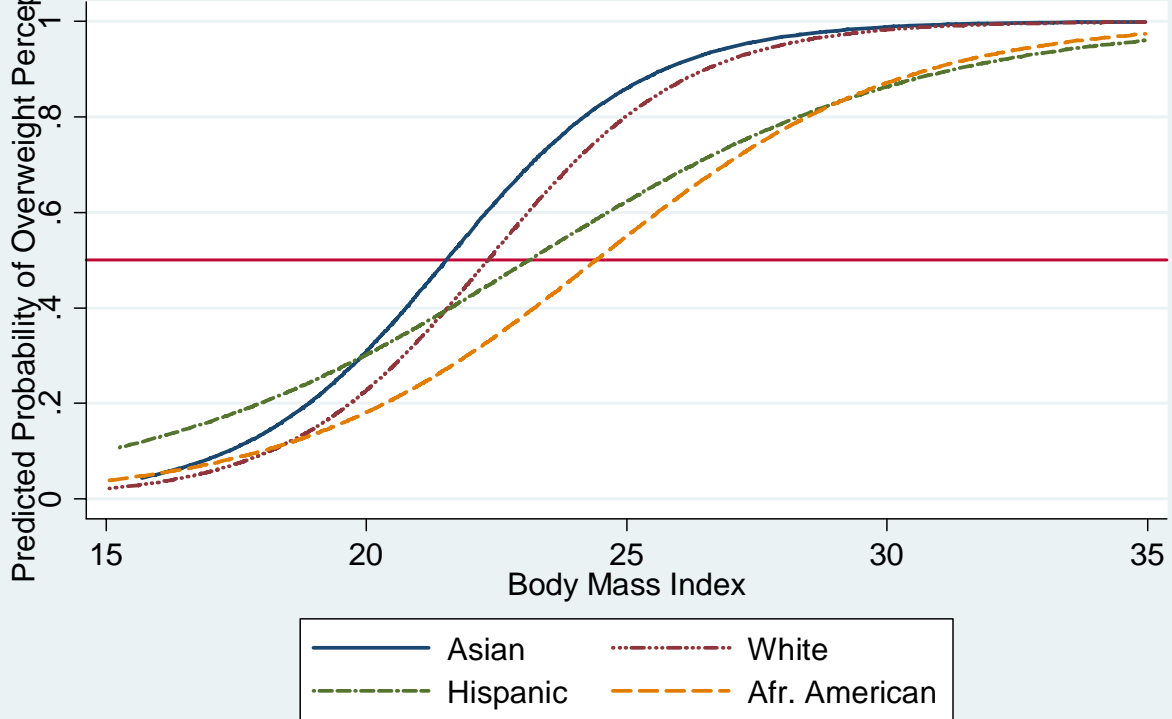


Table 1. Weight Perceptions, Actual Weight, and Weight Control Practices by Racial/Ethnic Group

	<u>White</u>	<u>African American</u>	<u>Hispanic</u>	<u>Asian</u>	<u>Total</u>
<u>Actual Weight</u>					
BMI (average)	22.1	24.6	23.5	21.3	22.6
<u>Weight Perceptions</u>					
Perceive Self Overweight	44.2%	47.9%	51.0%	41.9%	45.4%
<u>Weight Control Practices</u>					
No WCP	23.5%	30.4%	24.6%	21.6%	24.5%
Exercise	66.9%	56.8%	63.1%	68.6%	65.0%
Diet	25.9%	20.6%	24.3%	24.8%	24.9%
Deviant WCPs (pills, laxatives, vomiting)	1.7%	2.0%	2.5%	1.6%	1.8%
Other WCP	3.9%	5.4%	4.3%	3.8%	4.2%
<u>Weight Control Practice Regimes</u>					
No weight control practice	23.5%	30.4%	24.6%	21.6%	24.5%
Exercise only	46.9%	42.5%	45.4%	49.4%	46.2%
Diet only or Diet+Exercise only	24.0%	19.8%	23.3%	23.6%	23.3%
Any deviant weight control practice	1.7%	2.0%	2.5%	1.6%	1.8%
Other weight control practices	3.9%	5.4%	4.3%	3.8%	4.2%
Total N	3,942	1,513	1,202	541	7,272

Note: a. Total sample also includes 74 girls who identified as members of other racial/ethnic groups.

b. Respondents could indicate the use of more than one weight control practice.

c. African American girls have a significantly lower proportion than White, Hispanic, and Asian American girls ($p < .01$). No other group contrast is significant.

d. African American girls have a significantly lower proportion than White girls ($p < .01$). No other group contrast is significant.

e. Proportions do not significantly vary by racial/ethnic group.

f. Chi-square test significant at $p < .01$.

Table 2. Logistic Regression Analysis of Overweight Perceptions. Odds Ratios/[s.e. b], N=7,272.

	(1)	% change	(2)	% change	(3)	% change
<i>Actual weight (BMI)</i>	1.561**	56.1%	1.689**	68.9%	1.701**	70.1%
	[.039]		[.048]		[.050]	
<i>Race/ethnic status</i>						
African American	.454**	-54.6%	.447**	-55.3%	.452**	-54.8%
	[.057]		[.052]		[.049]	
Hispanic	.797	-20.3%	.709**	-29.1%	.729*	-27.1%
	[.118]		[.093]		[.090]	
Asian	1.472^	47.2%	1.518^	51.8%	1.396	39.6%
	[.291]		[.323]		[.319]	
Other	1.157	15.7%	1.115	11.5%	1.282	28.2%
	[.567]		[.618]		[.762]	
<i>Race/ethnicity by weight interactions</i>						
Afr. American x BMI			.833**	-16.7%	.833**	-16.7%
			[.035]		[.034]	
Hispanic x BMI			.774**	-22.6%	.773**	-22.7%
			[.037]		[.039]	
<i>Parental and Family Relations</i>						
Mother support					1.019	1.9%
					[.044]	
Father support					1.020	2.0%
					[.042]	
Family support					.671**	-32.9%
					[.046]	
<i>Peers and Schools</i>						
Friendship ties					1.002	.2%
					[.013]	
Friendship quality					.929	-7.1%
					[.055]	
1-2 school activities					.947	-5.3%
					[.097]	
3+ school activities					.848^	-15.2%
					[.076]	
GPA					.986	-1.4%
					[.052]	

(Table 2 cont'd on next page.)

Table 2. (cont'd)

	(1)	% change	(2)	% change	(3)	% change
<i>Social Class</i>						
Family income <= \$15k					.706*	-29.4%
					[.118]	
Family income \$16-34k					.868	-13.2%
					[.117]	
Family income >= \$60k					.969	-3.1%
					[.118]	
Missing on family income					.914	-8.6%
					[.124]	
Mother has college deg.					1.138	13.8%
					[.105]	
Father has college deg.					.939	-6.1%
					[.113]	
Mother in prof. occup.					1.206^	20.6%
					[.135]	
Father in prof. occup.					1.017	1.7%
					[.141]	
Maturation status	1.277**	27.7%	1.275**	27.5%	1.226**	22.6%
	[.070]		[.069]		[.068]	
Age	.939*	-6.1%	.939*	-6.1%	.905**	-9.5%
	[.028]		[.028]		[.027]	
Immigrant status	.803	-19.7%	.837	-16.3%	.940	-6.0%
	[.167]		[.159]		[.182]	
Two bio. parent family	.966	-3.4%	.983	-1.7%	.900	-10.0%
	[.077]		[.079]		[.167]	
McFadden's R ²	.28		.29		.30	

Robust standard errors in parentheses

^ significant at $p < .10$; * significant at $p < .05$; ** significant at $p < .01$

Table 3. Multinomial Logit Regression, with Relative Risk Ratio [exp(b)], Percent Change in the Relative Risk, and [Standard Error], N=7272

	Model 1 Exercise Only (n=3332) vs. None (n=1801)			Model 2 Diet/Diet & Exer. (n=1722) vs. None (n=1801)			Model 3 Pills, Vomit or Lax. (n=149) vs. None (n=1801)			Model 4 Pills, Vomit or Lax. (n=149) vs. Diet/Diet & Exer. (n=1722)		
	[exp(b)]		% change	[exp(b)]		% change	[exp(b)]		% change	[exp(b)]		% change
<i>Perceive Self Overweight</i>	1.852	***	85.20%	5.647	***	464.70%	11.580	***	1058.00%	2.051	*	105.10%
	[0.209]			[0.787]			[3.483]			[0.623]		
<i>Actual Weight</i>	1.044	**	4.40%	1.091	***	9.10%	1.033		3.30%	0.947	**	-5.30%
	[0.018]			[0.021]			[0.029]			[0.021]		
<i>Racial/Ethnic Status</i>												
African American	0.780	*	-22.00%	0.570	***	-43.00%	0.821		-17.90%	1.441		44.10%
	[0.091]			[0.093]			[0.223]			[0.362]		
Hispanic	1.085		8.50%	0.965		-3.50%	1.379		37.90%	1.429		42.90%
	[0.160]			[0.174]			[0.533]			[0.568]		
Asian	1.172		17.20%	1.078		7.80%	1.542		54.20%	1.431		43.10%
	[0.202]			[0.272]			[0.753]			[0.741]		
Other	1.133		13.30%	1.434		43.40%	1.099		9.90%	0.766		-23.40%
	[0.459]			[0.867]			[0.794]			[0.400]		
<i>Parental and Family Relations</i>												
Mother Support	1.019		1.90%	1.025		2.50%	0.900		-10.00%	0.877		-12.30%
	[0.038]			[0.050]			[0.092]			[0.090]		
Father Support	1.027		2.70%	0.927		-7.30%	0.848		-15.20%	0.915		-8.50%
	[0.039]			[0.047]			[0.088]			[0.094]		
Family Support	1.051		5.10%	0.951		-4.90%	0.720	^	-28.00%	0.757	^	-24.30%
	[0.073]			[0.082]			[0.134]			[0.125]		
<i>Peers and Schools</i>												
Friendship Quality	1.056		5.60%	1.134	^	13.40%	1.115		11.50%	0.983		-1.70%
	[0.063]			[0.078]			[0.159]			[0.141]		
Friendship Ties	1.095	***	9.50%	1.088	***	8.80%	1.081		8.10%	0.994		-0.60%
	[0.019]			[0.024]			[0.054]			[0.045]		
1-2 School Activities	1.573	***	57.30%	1.453	**	45.30%	0.899		-10.10%	0.618	^	-38.20%
	[0.158]			[0.190]			[0.265]			[0.179]		
3+ School Activities	2.052	***	152.00%	1.782	***	78.20%	0.784		-21.60%	0.440	*	-56.00%
	[0.212]			[0.259]			[0.257]			[0.154]		
GPA	1.258	***	25.80%	1.460	***	46.00%	1.066		6.60%	0.730	*	-27.00%
	[0.077]			[0.107]			[0.169]			[0.112]		

Table 3. (cont'd)

	[exp(b)]	% change	[exp(b)]	% change	[exp(b)]	% change	[exp(b)]	% change
<i>Social Class</i>								
Family Income <= \$15,000	1.083 [0.158]	8.30%	0.900 [0.184]	-10.00%	1.372 [0.594]	37.20%	1.523 [0.673]	52.30%
Family Income \$16-\$34,000	1.087 [0.139]	8.70%	0.994 [0.164]	-0.60%	1.263 [0.562]	26.30%	1.270 [0.518]	27.00%
Family Income >= \$60,000	1.099 [0.154]	9.90%	1.136 [0.190]	13.60%	1.094 [0.412]	9.40%	0.963 [0.350]	-3.70%
Missing Income	0.96 [0.125]	-4.00%	0.891 [0.135]	-10.90%	1.051 [0.376]	5.10%	1.179 [0.405]	17.90%
Father College Education	1.211 [0.168]	21.10%	1.081 [0.196]	8.10%	1.138 [0.441]	13.80%	1.052 [0.414]	5.20%
Mother College Education	1.115 [0.144]	11.50%	1.183 [0.149]	18.30%	1.172 [0.329]	17.20%	0.991 [0.261]	-0.90%
Father Prof. Occupation	1.033 [0.142]	3.30%	1.085 [0.187]	8.50%	0.737 [0.312]	-26.30%	0.679 [0.233]	-32.10%
Mother Prof. Occupation	1.137 [0.135]	13.70%	1.090 [0.146]	9.00%	1.170 [0.448]	17.00%	1.073 [0.449]	7.30%
Maturation Status	1.091 [0.063]	9.10%	1.252 [0.063]	*** 25.20%	1.565 [0.279]	** 56.50%	1.249 [0.208]	24.90%
Age	0.961 [0.025]	-3.90%	1.079 [0.032]	** 7.90%	1.150 [0.093]	^ 15.00%	1.066 [0.079]	6.60%
Immigrant Status	1.200 [0.291]	20.00%	1.469 [0.450]	46.90%	0.219 [0.151]	* -78.10%	0.149 [0.099]	*** -85.10%
2 Biological Parent Family	1.045 [0.174]	4.50%	1.263 [0.302]	26.30%	2.413 [0.951]	* 141.30%	1.910 [0.743]	^ 91.00%

^ significant at $p < .10$; * significant at $p < .05$; ** significant at $p < .01$; *** significant at $p < .001$

Appendix A. Observed combinations of weight control practices (unweighted %).

Regime	Combination of WCPs	n	%	Cum. %
1	No weight control practice	1,801	24.77	24.8
2	Exercise only	3,332	45.82	70.6
3	Exercise and diet only	1,153	15.86	86.5
3	Diet only	569	7.82	94.3
4	Exercise, diet, diet pills	46	0.63	94.9
4	Exercise and diet pills	21	0.29	95.2
4	Diet pills only	14	0.19	95.4
4	Diet and diet pills	11	0.15	95.5
4	Laxatives only	9	0.12	95.7
4	Vomiting only	8	0.11	95.8
4	Exercise and vomiting	8	0.11	95.9
4	Exercise, diet, and vomiting	7	0.1	96.0
4	Exercise, diet, and laxatives	7	0.1	96.1
4	Exercise and laxatives	4	0.06	96.1
4	Exercise, diet, diet pills, other	3	0.04	96.2
4	Exercise, diet, diet pills, laxatives	2	0.03	96.2
4	Exercise, laxatives, vomiting	1	0.01	96.2
4	Exercise, diet pills, other	1	0.01	96.2
4	Exercise, diet pills, laxatives	1	0.01	96.2
4	Exercise, diet, diet pills, laxatives, other	1	0.01	96.2
4	Diet and vomiting	1	0.01	96.3
4	Diet and laxatives	1	0.01	96.3
4	Diet, diet pills, laxatives	1	0.01	96.3
4	Diet pills and other	1	0.01	96.3
4	Diet pills and laxatives	1	0.01	96.3
5	Other weight control practice only	143	1.97	98.3
5	Exercise and other	89	1.22	99.5
5	Exercise, diet, other	23	0.32	99.8
5	Diet and other	13	0.18	100.0
		7,272	100	

Regime Legend:

1. No weight control practices (n=1,801).
2. Exercise only (n=3,332).
3. Diet only or diet + exercise only (n=1,722).
4. Any use of diet pills, laxatives, or vomiting (n=149).
5. Other weight control practice only or in combination with diet or exercise (n=268).