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Gender and Racial/Ethnic Differences in Body Image Development Among College Students

Meghan M. Gillen¹ and Eva S. Lefkowitz²

Meghan M. Gillen: mmg204@psu.edu; Eva S. Lefkowitz: EXL20@psu.edu

¹Division of Social Sciences, 1600 Woodland Road, The Pennsylvania State University, Abington, PA, 19001. Phone: (215) 881-7478, Fax: (215) 881-7623

²Department of Human Development and Family Studies, S-110 Henderson Building, The Pennsylvania State University, University Park, PA, 16802

Abstract

In the present study we used longitudinal methods to examine body image development during the early part of college. Students ($N = 390$; 54% female) who identified as African American (32%), Latino/a American (27%), and European American (41%) completed surveys during their first, second, and third semesters at college. There were overall gender and racial/ethnic differences in all three aspects of body image, and both stability and change in body image development. Female students' appearance evaluation became more positive, whereas male students' appearance evaluation showed no significant change. Individuals' body areas satisfaction increased over time, but remained stable when controlling for BMI. Appearance orientation did not change, and there were no racial/ethnic differences in body image development. Experiences in the college environment may play a role in these trends.

Keywords

body image development; longitudinal design; college students; gender; race/ethnicity

The early part of college may be important for body image development. Students often make crucial decisions about their health and social life independently of direct adult supervision. Living in close quarters with peers and joining campus groups that emphasize appearance or unhealthy eating habits (e.g., sororities, certain sports teams) may increase appearance-related concerns (Basow, Foran, & Bookwala, 2007; Milligan & Pritchard, 2006). Moreover, the campus environment may allow students freedom from some adult responsibilities (Arnett, 2000), heightening the potential for exploration. Students who are exploring may develop unhealthy attitudes or behaviors with respect to the body, such as eating unhealthy foods, binge drinking, or developing friendships with individuals who are concerned about their looks. In turn, their attitudes toward their body and appearance may transition during this time.

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Correspondence to: Meghan M. Gillen, mmg204@psu.edu.

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In the current study, we examine changes in three aspects of body image during the early part of college. The first two aspects are evaluative, and include appearance evaluation, which represents evaluation of overall physical appearance, and body areas satisfaction, which captures satisfaction with different areas of the body (Cash, 2000). The third aspect, appearance orientation, is the extent to which individuals are cognitively and behaviorally invested in their looks, and is non-evaluative (Cash, 2000). In particular, we focus on whether these three aspects change differentially by gender and racial/ethnic group.

Appearance Evaluation/Satisfaction

We examine the evaluation/satisfaction component because body satisfaction is linked to self-esteem, depression, and eating disorders (Frost & McKelvie, 2004; Polivy & Herman, 2002; Siegel, 2002). Previous studies that address change over time in this component of body image tend to focus on body dissatisfaction in adolescents. For example, some work shows that adolescent girls experience an increase in body dissatisfaction (Bearman, Presnell, Martinez, & Stice, 2006; Eisenberg, Neumark-Sztainer, & Paxton, 2006), stability (Jones, 2004; Schooler, 2008), or a decline in dissatisfaction for high school girls transitioning into emerging adulthood (Eisenberg et al., 2006). Among adolescent boys, results are mixed as well. Some studies illustrate a decline in body dissatisfaction during adolescence (Bearman et al., 2006; Jones, 2004), but another study showed an overall increase in body dissatisfaction (although patterns differed by initial BMI and change in BMI, as well as racial/ethnic group; Eisenberg et al., 2006).

Longitudinal research on adolescents has also focused on racial/ethnic differences in body dissatisfaction. One study found that African American girls had a less steep increase in body dissatisfaction from ages 11 to 16 than did European American girls (Striegel-Moore, Schreiber, Lo, Crawford, Obarzanek, & Rodin, 2000). In another study, African Americans and European Americans did not differ in body dissatisfaction in a 5-year span beginning in early adolescence (approximately ages 13 - 18) but African Americans experienced less of an increase in body dissatisfaction than did European Americans in a 5-year span beginning in middle adolescence (approximately ages 16 - 21; Paxton, Eisenberg, & Neumark-Sztainer, 2006).

Here, we build on past work by examining whether appearance evaluation and body areas satisfaction change or remain stable in early emerging adulthood. We use a short-term longitudinal design to examine changes in body image in a large sample of men and women from different racial/ethnic groups. This design allows us to capture development during a time of possibly rapid change. Previous studies have reported cross-sectional gender and racial/ethnic differences in appearance evaluation and body satisfaction (Altabe, 1998; Clark et al., 2005; Gillen & Lefkowitz, 2006; Grabe & Hyde, 2006; Ricciardelli, McCabe, Williams, & Thompson, 2007). We know of no studies that have examined longitudinal changes in this construct in college students, including how development might differ by gender and racial/ethnic group.

Past research has, however, examined longitudinal changes in related constructs, such as eating behavior and weight/body mass index (BMI). One study found that for female students, maladaptive eating patterns remain stable during the first 20 months of college (Cooley, Toray, Valdez, & Tee, 2007). However, other work suggests that students tend to gain weight and experience an increase in BMI during the early part of college (Gillen & Lefkowitz, 2011; Hoffman, Policastro, Quick, & Lee, 2006; Morrow, Heesch, Dinger, Hull, Kneehans, & Fields, 2006). Students report that campuses offer unhealthy food options (Cluskey & Grobe, 2009), and they tend to store unhealthy food items in their dormitory rooms (Nelson & Story, 2009), which may in part explain this trend. Given that BMI is associated with body dissatisfaction in male and female college students (Yates, Edman, &

Aruguete, 2004), we expect that students will evaluate their appearance less positively and become less satisfied with their bodies over time.

Appearance Orientation

There is less research on constructs related to appearance orientation. Appearance orientation is associated with neuroticism and disordered eating in women (Davis, Dionne, & Shuster, 2001; Petrie, Greenleaf, Reel, & Carter, 2009). A related construct, self-objectification, is linked to lower math performance in women (Fredrickson, Roberts, Noll, Quinn, & Twenge, 1998), and more recently, in men and women from different racial/ethnic groups (Hebl, King, & Lin, 2004). Given these associations, it is important to examine trends in appearance orientation. Previous research on appearance orientation shows cross-sectional gender and racial/ethnic differences (Clark et al., 2005; Gillen & Lefkowitz, 2006), but we know of no longitudinal studies on this variable in college students.

It is possible that appearance orientation increases during the early part of college. According to objectification theory (Fredrickson & Roberts, 1997) women exist in a culture that views women's bodies as sexual objects and teaches women to assume this same perspective on their own bodies. As a result of self-objectification, women repeatedly self-monitor their physical appearance, as if assuming an outsider's view of how they look. Although not predicted by objectification theory (Fredrickson & Roberts, 1997), recent research indicates that men are also vulnerable to self-objectification in certain situations (Hebl et al., 2004). We expect that self-objectification will be particularly relevant for men and women who are beginning college, as they are exposed to new peers who may gaze at and evaluate them in sexually objectifying ways (Fredrickson & Roberts, 1997). Thus, individuals' appearance orientation may increase over their first several semesters at college.

Research Questions

1. How do appearance evaluation, body areas satisfaction, and appearance orientation change across the first three semesters of college?
2. Do changes in appearance evaluation, body areas satisfaction, and appearance orientation vary by gender and race/ethnicity?

Method

Participants and Procedures

Data are from a larger study described to participants as "research intended to examine how college aged men and women interact, and what their attitudes are like." Participants were told that questionnaires included a range of topics, including physical appearance, but were not aware of the specifics of the topic of this particular study. The study was conducted at a large, predominantly European American university (total enrollment during participants' first semester was 4% African American, 3% Latino/a American, and 81% European American) in the Northeast USA. We obtained contact information from the registrar's office for all African American, Latino/a American, and European American first year students. We then mailed letters to all African American and Latino/a American students, as well as a randomly selected 9% of European American students (to obtain approximately equal numbers in each racial/ethnic group) in September of their first year (Time 1 = T1, Fall 2002). We only recruited traditional age students who ranged from 17 to 19 years old. These students are simultaneously entering college and emerging adulthood, a period marked by exploration in multiple domains (Arnett, 2000). The campus environment may allow emerging adult students to be free of some adult responsibilities (Arnett, 2000), heightening the potential for exploration. Exploration may include developing unhealthy

attitudes or behaviors with respect to the body. Non-traditional age students may have more family and work responsibilities, and thus, fewer opportunities for exploration. Of the 844 contacted students, 52% agreed to participate, including 58% of African Americans, 54% of Latino/a Americans, and 46% of European Americans, $\chi^2(2, 844) = 9.44, p < .01$. Participants completed a survey in a classroom-based setting and were invited to complete the survey again during the next two semesters (T2- Spring 2003, T3- Fall 2003). Compensation was \$25, \$30, and \$35 for each time point, respectively.

Of the original 434 students who completed surveys at T1, 414 (95%) completed surveys at T2, and 390 (90%) completed surveys at T3. To examine attrition biases, we compared individuals who completed surveys at T3 ($N = 390$) to those who did not ($N = 44$) on all analytic variables. Two of the two χ^2 and four t -tests were significant. Specifically, retained participants were less likely to be male, $\chi^2(1, 434) = 8.05, p < .01$, Latino/a American, and African American, $\chi^2(2, 434) = 7.28, p < .05$.

Analyses are on the 390 students (54% female) who participated in all three waves. They ranged in age from 18.49 to 20.81 years ($M = 19.50, SD = 0.40$; females, $M = 19.44, SD = 0.39$; males, $M = 19.57, SD = 0.41$). Thirty two percent identified as African American ($n = 124, 55\%$ female), 27% as Latino/a American ($n = 107, 55\%$ female), and 41% as European American ($n = 159, 54\%$ female). Students had an average BMI in the upper range of normal at each time point (T1: $M = 23.66, SD = 4.50$; T2: $M = 23.99, SD = 4.36$; T3: $M = 24.07, SD = 4.56$; overall range 13.39 – 46.17), as defined by the Centers for Disease Control and Prevention (2011). At T1, 99% of students in the sample lived in a campus dormitory.

Measures

Body image—We assessed three aspects of body image, all from the Multidimensional Body-Self Relations Questionnaire (Cash, 2000), a measure with considerable psychometric support among college students (e.g., Cash, Morrow, Hrabosky, & Perry, 2004; Clark et al., 2005). The appearance evaluation subscale measures the extent to which individuals feel physically attractive or unattractive (e.g., seven items, “Most people would consider me good-looking”). Response options range from 1 = *definitely disagree* to 5 = *definitely agree*. Body areas satisfaction assesses the extent to which individuals are satisfied with various parts of their body (e.g., nine items, “hair”, “mid torso”). Participants report their agreement on a scale ranging from 1 = *very dissatisfied* to 5 = *very satisfied*. The appearance orientation subscale assesses the degree of cognitive and behavioral investment in appearance (e.g., 12 items, “I am self-conscious if my grooming isn’t right”). It captures a relatively benign aspect of appearance investment, more similar to the Motivational Salience subscale of the Appearance Schemas Inventory-Revised than the Self-Evaluative Salience subscale, which assesses a more dysfunctional type of investment (Cash, Melnyk, & Hrabosky, 2004). Responses on the appearance orientation subscale range from 1 = *definitely disagree* to 5 = *definitely agree*. Internal consistency reliability for appearance evaluation (T1, $\alpha = .88$; T2, $\alpha = .90$; T3, $\alpha = .90$), body areas satisfaction (T1, $\alpha = .78$; T2, $\alpha = .80$; T3, $\alpha = .81$), and appearance orientation (T1, $\alpha = .87$; T2, $\alpha = .88$; T3, $\alpha = .88$) was satisfactory and comparable to Cash (2000).

Results

We performed mixed model ANOVAs to address our research questions of whether body image changes over time and whether these changes vary by gender and race/ethnicity. We entered time as a within-person factor and gender and race/ethnicity as between-person factors. The three facets of body image were the dependent variables.

For appearance evaluation, there were main effects of gender and race/ethnicity (see Table 1). Male students ($M = 3.63$, $SE = 0.06$) were more satisfied with their appearance than female students ($M = 3.47$, $SE = 0.05$). Tukey post hoc tests revealed that African Americans ($M = 3.69$, $SE = 0.07$) were more satisfied with their appearance than European Americans ($M = 3.46$, $SE = 0.06$, $p < .05$). Latino/a Americans ($M = 3.51$, $SE = 0.07$) did not differ from either group ($ps > .05$). There was also an interaction between time and gender. To follow up on the time \times gender effect, we performed the ANOVA separately by gender (removing gender as a factor). The time effect was significant only for female students ($p < .01$), who became increasingly satisfied with their appearance over time. Next, we performed simple contrast tests with T1 as the reference point. Female students' T1 and T2 appearance evaluation did not differ ($p > .05$), but T1 appearance evaluation was significantly lower than T3 ($p < .01$).

In the body areas satisfaction model, there were main effects for gender, race/ethnicity, and time (see Table 1). Male students ($M = 3.66$, $SE = 0.05$) were more satisfied with areas of their body than female students ($M = 3.44$, $SE = 0.04$). Tukey post hoc tests revealed that African Americans ($M = 3.66$, $SE = 0.06$) were more satisfied with areas of their body than European Americans ($M = 3.49$, $SE = 0.05$) and Latino/a Americans ($M = 3.49$, $SE = 0.06$; $ps < .05$). Simple contrast tests using T1 as the reference point revealed that body areas satisfaction at T1 did not differ from T2 ($p > .05$), but body areas satisfaction at T1 was significantly lower than at T3 ($p < .05$).

In the ANOVA on appearance orientation, results showed significant main effects for gender and race/ethnicity (see Table 1). Female students ($M = 3.59$, $SE = 0.04$) were more oriented toward their appearance than male students ($M = 3.22$, $SE = 0.05$). Tukey post hoc tests revealed that African Americans ($M = 3.50$, $SE = 0.06$) were more oriented toward their appearance than European Americans ($M = 3.30$, $SE = 0.05$, $p < .05$). Latino/a Americans ($M = 3.42$, $SE = 0.06$) did not differ from either group ($ps > .05$). There were no significant main effects of or interactions with time.

Because BMI is associated with body dissatisfaction in college students (Yates et al., 2004), we performed the analyses described above as mixed model ANCOVAs, controlling for BMI at T1. The reported effects were the same for all variables with the exception of the time effect for body areas satisfaction which was no longer significant, $F(2, 734) = 1.10$, $p > .05$.

Discussion

During the early part of college, students experience a number of social and environmental changes, including living away from their parents, living in close quarters with same- and other-sex peers, and increased independence in daily living and decision making about all domains, including health. Although these changes have the potential to impact body image, few studies employ longitudinal designs to examine body image development during this time. In the present study, we used a short-term longitudinal design to examine changes in body image during the first three semesters of college. Overall, results indicated both stability and change in body image during this important period. The evaluation/satisfaction aspects of body image showed improvement, particularly for female students. However, appearance orientation remained stable.

Students' body areas satisfaction, and for female students only, appearance evaluation, increased. Body image may improve after taking courses that encourage criticism of unrealistic images in the media and/or raise awareness of body image and eating problems, or after engaging in student activity programs that encourage positive body image. Also,

many students likely transitioned from smaller high schools to this large university, with increased exposure to people who differ in physical appearance and attitudes. However, after controlling for BMI during the first semester, the trend toward improved body areas satisfaction disappeared. This finding suggests that students' BMI during their first semester of college may be an important factor in determining changes in body areas satisfaction over the next two semesters. In contrast, BMI during the first semester did not appear to impact changes in appearance evaluation as findings for this variable were the same with and without BMI as a control.

Despite increases over time, female students' appearance evaluation remained less positive, on average, than male students' appearance evaluation. Thus, although female students' appearance evaluation became more similar to men's, it nonetheless remained lower. The overall gender difference mirrors past cross-sectional work (Clark et al., 2005), including cross-sectional work with this sample (Gillen & Lefkowitz, 2006), and supports objectification theory (Fredrickson & Roberts, 1997). As women's bodies are culturally objectified, women begin to objectify themselves. Self-objectification may lead women to be overly critical of their bodies, and thus to have poorer appearance evaluation than men. Results also show that African Americans evaluated their appearance more positively than European Americans, and were more satisfied with areas of their body than European Americans and Latino/a Americans. African American college students desire larger body sizes than European American students (Arugueté, Nickleberry, & Yates, 2004), and African American adolescent girls have more flexible ideas of attractiveness than European American girls (Parker, Nichter, Nichter, Vuckovic, Sims, & Ritenbaugh, 1995). Because of these preferences, African Americans may have more positive attitudes about their appearance.

In contrast to the evaluation/satisfaction aspects of body image, appearance orientation showed relative stability. Based on previous research on objectification theory (Hebl et al., 2004), we expected that appearance orientation would increase during the early part of college. Perhaps students learn appearance-related cognitions and behaviors at an early age from parents and, over time, these develop into stable habits. For example, a female student who applies makeup each morning and frequently thinks about ways to improve her appearance is unlikely to stop because of the social rewards of doing so. Going to college may play a minimal role in altering these sorts of cognitions and behaviors.

Although appearance orientation did not change over time, there were overall group differences by gender and race/ethnicity, similar to prior cross-sectional work on this sample (Gillen & Lefkowitz, 2006). In particular, women had higher appearance orientation than men, as suggested by objectification theory (Fredrickson & Roberts, 1997). Women objectify their bodies, as the larger culture does, and thus, are attentive to their physical appearance. Results also showed that African Americans had higher appearance orientation than European Americans. Research on African American girls suggests that their physical appearance serves a dual function: to express individuality and to communicate an image of their family and community members (Parker et al., 1995). Thus, African Americans may be more attentive to appearance because it reflects the image of more than one individual. Also, African American girls and women, as compared to European American girls and women, seem to be more flexible when defining beauty (Parker et al., 1995). For African American women, being well-groomed, having a unique personal style, and exuding confidence is attractive, not conforming to someone else's or society's standard of attractiveness (Parker et al., 1995). Therefore, African American women may be more concerned with appearance, but are not necessarily more dissatisfied with their looks.

Body image development did not differ by racial/ethnic group. That is, despite initial differences, Latino/a American, African American, and European American students showed similar changes or stability in body image. Students experience common ecological changes during the early part of college (Maggs, 1997), such as living in dormitories, and exposure to similar food choices, student clubs, and parties. These changes may shape body image in similar ways for students from different racial/ethnic backgrounds. Future research should consider the role of acculturation in body image development, as students who are less acculturated to U.S. values, attitudes, and behaviors may show different patterns of change. Perhaps these students have had less exposure to the thin ideal in the U.S. media, and with exposure to it during college, may show declining satisfaction with appearance/body shape.

Limitations and Conclusions

This study has several limitations. Self-report measures were the only means of assessment; self-reported height and weight in particular may not be accurate. Also, the results of this study only pertain to the first two years of college. Future studies should extend these findings by including multiple assessments of body image development from before the first year of college to beyond college graduation. Findings should not be applied to early emerging adults who are not in college and individuals at more racially/ethnically diverse universities. The effects of the college environment on body image may be very different for minority students at diverse universities than for students at a predominantly European American university.

Despite these limitations, this study adds to the literature in a number of ways. We know of no prior studies that have examined body image development across the early part of college in a racially/ethnically diverse sample. This study extends prior longitudinal work on adolescents by illustrating trends in body image as individuals enter early emerging adulthood. Results illustrate improvement in the evaluation/satisfaction components of body image, particularly for female students. Appearance orientation, however, remained stable. Taken together, results suggest that the early part of college is a dynamic period for body image development, with potential mental and physical health implications.

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Research Highlights

- We examine body image development longitudinally during the early part of college.
- Female students become more satisfied with their appearance.
- Male and female students become more satisfied with areas of their body.
- Orientation toward appearance remains stable during the first three semesters.
- Body image differs by racial/ethnic group, but body image changes do not differ.

Table 1

Mean scores on body image at Times 1, 2, and 3

	T1 M (SE)	T2 M (SE)	T3 M (SE)	F (gender)	F (race/ethnicity)	F (time)	F (time × gender)
<i>Appearance evaluation</i>							
Total sample	3.55 (0.04)	3.53 (0.04)	3.58 (0.04)	4.21*	3.42*	1.99	5.22**
Male students	3.68 (0.06)	3.60 (0.06)	3.63 (0.06)				
Female students	3.43 (0.06)	3.46 (0.06)	3.54 (0.06)				
<i>Body areas satisfaction</i>							
Total sample	3.53 (0.03)	3.53 (0.03)	3.58 (0.03)	12.79***	3.38*	4.42*	0.07
<i>Appearance orientation</i>							
Total sample	3.41 (0.04)	3.41 (0.03)	3.40 (0.04)	32.39***	3.65*	0.13	1.00

Note -- T: Time. Due to missing data, sample size ranged from $N = 378$ to 380. Effect sizes (η^2) for the F s are: Appearance Evaluation—gender (.01), race/ethnicity (.02), time × gender (.01); Body Areas Satisfaction—gender (.03), race/ethnicity (.02), and time (.01); and Appearance Orientation—gender (.08), race/ethnicity (.02). Two-way interactions between time and race/ethnicity and three-way interactions were nonsignificant and therefore are not reported.

* $p < .05$,
 ** $p < .01$,
 *** $p < .001$