BODY IMAGE DEVELOPMENT IN EMERGING ADULTHOOD

A Thesis in
Human Development and Family Studies

by
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ABSTRACT

The current study takes a developmental approach to understanding body image in emerging adulthood. Data were drawn from the Gender & HIV Study, a longitudinal study of college students. Students completed surveys during their first, second, and third semesters at college. At Time 1 (N = 434), participants’ ages ranged from 17.5 to 19.8 years (M = 18.5; SD = 0.4; 52% female). Thirty two percent identified as African American, 29% as Latino American, and 39% as European American. The first paper examined body size perceptions, and demonstrated the importance of weight status, gender, and ethnicity in these perceptions. Contrary to popular belief, women did not tend to see their size as larger than independent observers did. In the second paper, open-ended questions, coded for content, were used to assess participants’ perceptions of messages about physical appearance from family, peers, school, and media. The most common messages they perceived related to the importance/non-importance of appearance, positive remarks about their appearance, and the association between attractiveness and success. Women perceived more frequent and more negative messages than did men. Additionally, the family was perceived to convey more health-focused messages, whereas the media was perceived to convey more superficial messages about appearance. The third paper takes a longitudinal approach to understanding body image development across the college transition. Results indicated relative stability in most aspects of body image. However, women (but not men) became more satisfied with their overall appearance, in spite of a slight increase in their body size. There were no ethnic differences in body image development. Gendered personality traits emerged as predictors of body image development, although associations were fairly small. Taken together, findings indicate that emerging adult women experience greater body image disturbance than do men. However, women do feel more positive about their appearance as they progress through college. The relatively few ethnic differences suggest that sharing a common ecological context during this time may promote more similar views of appearance among students from different ethnic backgrounds. Implications for future work on body image in emerging adulthood are discussed within each paper.
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## DO YOU SEE WHAT I SEE? GENDER AND ETHNIC DIFFERENCES IN PERCEPTIONS OF THE BODY

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## EMERGING ADULTS’ PERCEPTIONS OF MESSAGES ABOUT PHYSICAL APPEARANCE

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Body image development in emerging adulthood

The following is a dissertation comprised of three papers that address body image development in emerging adulthood, with each focusing on a unique theme. The first paper uses figure drawings to examine body image. The versatility of this measure allows the creation of several constructs that have important implications for emerging adults’ body image—the degree to which they see their bodies as differing from an ideal size they believe others have for them, and the extent to which estimates of their own body size differ from estimates made by others. The second paper also addresses the role of other individuals in emerging adults’ body image, but instead uses open-ended methods to gain an in-depth understanding of their perceptions. Specifically, this paper focuses on emerging adults’ perceptions of messages about physical appearance from family, peers, school, and media, and the degree to which these perceptions differ by gender and ethnicity. The final paper builds on the first two by using a longitudinal design to examine changes in body image during the early college years. It examines body image development over time, including whether changes vary by gender and ethnicity, and the extent to which factors present during the first semester of college are meaningful for body image later on.

Theories of Body Image Development

Before presenting each paper, it is important to specify how body image is defined. In simple terms, body image represents individuals’ “view from the inside”, or their subjective internal representation of their physical appearance (Cash, 1990). Empirical work on body image, however, often conceptualizes this term as a construct consisting of multiple parts. Aspects of body image include: perceptual (size perception accuracy), behavioral (avoidance of circumstances that may give rise to body-related evaluation), affective (feelings of distress or
anxiety about appearance), and cognitive (attitudes and beliefs about appearance) (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). Current research focuses largely on satisfaction with or evaluation of appearance, a general subjective construct that may have affective, cognitive, and behavioral components (Thompson et al., 1999). This focus may be due not only to an abundance of well-developed measures of this construct that are easy to administer (Heinberg, 1996), but perhaps more importantly, to the established link between poor appearance evaluation/ satisfaction and clinical eating disorders (Polivy & Herman, 2002). Many empirical studies as well as the DSM-IV model body dissatisfaction as one of the primary causes of eating disorders (Polivy & Herman). Moreover, many social and psychological factors that are linked with eating disorders are believed to exert their influence through body dissatisfaction (Polivy & Herman).

Although body dissatisfaction may increase risks for eating disorders, it is also important to recognize that body dissatisfaction might also work to *promote* health. Heinberg, Thompson, and Matzon (2001) argue that a moderate level of dissatisfaction with the body might encourage individuals to improve their physical health. In light of the recent obesity epidemic among youth in the US (Committee on Prevention of Obesity in Children and Youth, 2005), this point is particularly significant. That is, for those who are overweight or obese, body dissatisfaction might be particularly beneficial (Heinberg et al.). Because of the link between the subjective component of body image, eating disorders, weight, and health, all three papers focus on this aspect of body image.

Research on this subjective component is drawn largely from two theoretical perspectives: the interpersonal and the sociocultural models. According to the interpersonal perspective, interpersonal relationships in individuals’ lives play a significant role in their body
image. Those who are exposed to harmful messages from these individuals are expected to be less satisfied with their bodies (Heinberg, 1996; Thompson et al., 1999). The sociocultural model (Thompson et al.) argues that pervasive cultural ideals of attractiveness—particularly the thin ideal for women—influence body image. These ideals are fairly narrow, and therefore, difficult for most people to achieve. The consequent feeling of not being able to “measure up” to these standards leads to unhappiness with appearance. The importance of interpersonal influences, coupled with the unrealistic cultural standards of attractiveness individuals believe they should meet, are integrated across the three papers. In addition to these perspectives, I also argue that ecological changes—changes that occur during the transition to college—may contribute to body image.

**Body Image during the Transition to College**

The transition to college is a dynamic time period in students’ lives marked by both challenges and opportunities (Maggs, 1997). These feelings may include fear and sadness of leaving familiar friends and family behind, but eagerness and excitement about the new experiences that lie ahead. One aspect of this new experience is living with peers in dormitories. Living among peers may heighten the tendency to compare one’s appearance to others, as well as increase anxiety about being evaluated. Some argue that the nature of the college campus itself—as an institution somewhat removed from the rest of the community—may foster competition in multiple domains, including appearance (Striegel-Moore, Silberstein, & Rodin, 1986). The experience of moving to a residential college also yields a new freedom from adult supervision for perhaps the first time in students’ lives. Students must therefore make a number of important decisions on their own such as their choice of academic path, friendship groups, eating habits, spiritual beliefs, and recreational activities. The decisions made during this formative time
period, ranging from joining a sorority to indulging in late-night pizza, can have important implications for students’ body image.

Traditional-age first year students are also entering emerging adulthood, a period of life ranging from ages 18 to 25 that is marked by exploration in multiple domains, including identity, relationships, and worldviews (Arnett, 2000). Residing in a campus environment allows students to delay the assumption of adult responsibilities (Maggs, 1997), therefore heightening the potential for exploration during this developmental period. As with any situation where the options are numerous, this environment carries with it the potential for risk. In the context of the appearance-related pressures on college campuses, it is likely that some students may develop behaviors or attitudes that increase their risk for body image problems. Body image problems are, in turn, associated with a number of other problems, such as eating disorders (Polivy & Herman, 2002), depression (Siegel, 2002; Stice & Bearman, 2001), and substance use, including steroid use (Brower, Blow, & Hill, 1994), alcohol use (Granner, Black, & Abood, 2002), and cigarette smoking (Granner et al.; Stice & Shaw, 2003). It is for these important reasons that the current dissertation focuses on body image development in emerging adult college students.

Contributions to Literature

In addition to highlighting the theoretical and developmental foundations of this dissertation, it is also important to point out the several unique contributions that these papers may make to the literature on body image. The first contribution they offer is their fairly new methodological approaches. The first paper takes advantage of the many uses of figure drawing measures. Traditionally, these measures have been used to capture individuals’ perception of their own current body size, as well as the size they would ideally like to be. Difference scores are then calculated to represent the discrepancy between these values, with larger discrepancies
representing a greater degree of body dissatisfaction (Williamson, Gleaves, Watkins, & Schlundt, 1993). Within this paper, however, figure drawings are also used to capture individuals’ perception of the body size they believe others see as ideal. They are also used as observational tools for rating others’ actual body size, a rarely used yet quick and sound method of assessing this variable (Phelps, Johnston, Jimenez, Wilczenski, & Andrea, 1993; Pulvers et al., 2004). The second paper also offers a methodological contribution through its use of open-ended methods. The literature on social and cultural influences on body image largely focuses on how messages about appearance and other body-related issues are conveyed to young people, rather than the actual content of these messages (e.g., Benedikt, Wertheim, & Love, 1998; Pike & Rodin, 1991). Open-ended questions, in which responses are unlimited, are an appropriate first step for understanding the range of actual messages perceived. The third paper’s methodological contribution is its use of a longitudinal design. To my knowledge, no published work has examined changes in body image (and the factors that contribute to these changes) in the population I examine here—emerging adults during the transition to college. Instead, most studies of this group are cross-sectional and therefore offer little information about how body image might change during this dynamic time period.

Another contribution these papers offer to the literature is their inclusion of both men and women, as well as individuals from multiple ethnic groups. Many existing studies focus on samples of mostly European American girls and women (e.g., Byely, Archibald, Graber, & Brooks-Gunn, 2000; Cash & Henry, 1995), yet evidence suggests the importance of studying more diverse samples. In particular, there has been a recent shift toward a thin and muscular ideal for men (Olivardia, 2002), and a simultaneous increase in body dissatisfaction (Cash, Winstead, & Janda, 1986; Garner, 1997), with some studies showing that men are equally as
dissatisfied with their bodies as are women (Cohn & Adler, 1992; Silberstein, Striegel-Moore, Timko, & Rodin, 1988). In terms of ethnicity, several studies indicate that African Americans have more positive views of their bodies than do European Americans and Latino Americans (Altabe, 1998; Miller et al., 2000). Besides these mean differences in body image, little is known about other aspects of body image development in ethnic minority individuals, particularly Latino Americans, such as the messages they perceive from socialization agents about physical appearance, and how their body image changes over time. To address these gaps in the literature, these papers will examine men and women who identify as African American, Latino American, and European American.

Finally, these papers can be distinguished from many others on college students’ body image because they examine students’ experiences within a developmental context. Studies of college students are sometimes criticized for convenience sampling because of students’ relative proximity to university research laboratories. However, like any other age group, traditional-age college students must address their own developmental tasks. As noted, exploration in multiple domains is a salient issue for emerging adult college students (Arnett, 2000). These papers address the issue of exploration, as well as some unique features of the college experience itself, that may play an important role in body image development.
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Do you see what I see? Gender and ethnic differences in perceptions of the body

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Abstract

In the present study we used figure drawings to assess multiple perceptions of body size. Emerging adult college students ($N = 164$; ages 18 – 20; 26% African American, 25% Latino American, 49% European American) completed surveys on their perception of their own body size, the size they see as ideal for themselves, and the size they think their peers would see as ideal. Participants’ body size was also rated by independent observers. Most European American and Latina American women perceived that their peers wanted them to be thinner, whereas their male counterparts perceived that their peers wanted them to be either smaller or larger. Contrary to popular belief, women did not tend to see their own body size as larger than independent observers did. Results indicate the importance of weight status, gender, and ethnicity in body size perception, and suggest that feeling discrepant from the standards believed to be held by opposite-sex peers is more meaningful for body image than is viewing one’s own body size inaccurately.
Do you see what I see? Gender and ethnic differences in perceptions of the body

From the first glance in the mirror in the morning, to a first date in the evening, many individuals ask themselves an important question: do others see what I see? Discrepancies between views of one’s own appearance and the views held by others may be critical for understanding body image. Interpersonal factors are indeed well-recognized as critical factors in the development of body image (J. K. Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). In the US, a thin body is considered ideal for women (J. K. Thompson et al., 1999); recent work suggests that a lean and muscular figure is ideal for men (Olivardia, 2002). Individuals must not only worry about achieving these ideals for their own self-satisfaction but also, and perhaps more importantly, for concern over how others will evaluate them if they fall short. Because these body ideals are often difficult for many to achieve, individuals may feel that they are being negatively evaluated by others, regardless of whether these perceptions are accurate. In the current study, we examine emerging adults’ perceptions of their own body size as well as ideal sizes for themselves and others. In addition, we examine the degree to which these perceptions reflect others’ actual beliefs.

Perceptions of the body

According to the self-discrepancy theory (Higgins, 1987), individuals have an actual self—their perception of their actual appearance—as well as several ideal selves. These ideal selves may consist of various perceptions, including individuals’ own ideal self, as well as their perceptions of others’ ideal self. The critical construct here is the degree of discrepancy between these actual and ideal selves. That is, the greater the discrepancy between perceptions of reality and perceptions of what is ideal, the greater the body image problems. This idea has served as an important theoretical base for figure drawings, measures that assess perceived body size and
ideal body size (e.g., M. A. Thompson & Gray, 1995). Figure drawings consist of a series of silhouettes ranging from extremely thin to obese. Participants must choose the same-gender figure that best represents their perceived current size, and the figure that best approximates their ideal size. Ideal size is often assessed as the size considered ideal by individuals’ own standards, with a greater difference between perceived size and own ideal size representing the degree of body dissatisfaction (Williamson, Gleaves, Watkins, & Schlundt, 1993).

Perceived Body Size and Own Ideal Body Size (Body Dissatisfaction)

Body dissatisfaction is an important construct to examine because it poses risks for various clinical outcomes in women, including depression (Stice & Bearman, 2001) and eating disorder symptoms (Stice, Presnell, & Spangler, 2002; Vohs et al., 2001). Because of the gravity of these disorders, studies have focused on understanding the correlates and predictors of body dissatisfaction itself (e.g., Jones, 2004). In particular, research has focused on understanding gender differences in this construct. Some studies show that women are more dissatisfied with their bodies than are men (Altabe & Thompson, 1993; Fallon & Rozin, 1985; Markey, Markey, & Birch, 2004). Yet others show that men and women report fairly similar levels of body dissatisfaction but differ in the direction of their unhappiness, with most women wanting to be smaller, and men more divided in their desire to be smaller or larger (Cohn & Adler, 1992). These findings suggest that the ideal of female beauty may be more narrow than the ideal for boys and men, and that the male ideal may reflect a desire to be both leaner (i.e., smaller) and more muscular (i.e., larger).

More recent research on body dissatisfaction has examined individuals from different ethnic groups, particularly African Americans, European Americans and, less often, Latino Americans. These studies rarely test both gender and ethnic differences together, leading to
somewhat piecemeal conclusions about how these variables might interact. In prior work with college students, we found no ethnic differences in body dissatisfaction between African Americans, Latino Americans, and European Americans although we did find ethnic differences in other measures of body image (i.e., appearance evaluation) (Gillen & Lefkowitz, 2006). In another study that examined all three of these groups, results showed that African Americans were more satisfied with their bodies than both European Americans and Latino Americans (Story, French, Resnick, & Blum, 1995).

Perceived Body Size and Others’ Ideal Body Size

A construct less investigated in the literature, although perhaps equally important, is the discrepancy between individuals’ perception of their own body size and the size they believe others consider ideal for them. As members of the same cohort who are exposed to similar culture-wide values about body size, peers may be a particularly important group to examine. Studies show similar levels of body image disturbance within same-sex female peer groups (Paxton, Schutz, Wertheim, & Muir, 1999; Schulken, Pinciaro, Sawyer, Jensen, & Hoban, 1997), as well as the presence of “fat talk” in these groups, a style of conversation in which a girl claims that she is fat and another reassures her that she is not (Nichter & Vuckovic, 1994; Wertheim, Paxton, Schutz, & Muir, 1997). Female adolescents also perceive that thinness is important for looking attractive to boys (Wertheim et al., 1997), suggesting that peers (both same- and opposite-sex) can shape how girls and women feel about their bodies.

Given that peers may play an important role in young women’s body image, it is important to understand the extent to which these individuals believe they meet their peers’ standards of attractiveness. Not surprisingly, women perceive their own body size to be larger than the figure they think their same-sex peers would find ideal (Forbes, Adams-Curtis, Rade,
Although few studies have focused on appearance-related norms in male peer groups, there is evidence that men perceive their own body size to be smaller than the size they believe other men would see as ideal (Forbes et al., 2001).

In terms of beliefs about opposite-sex peers, women tend to see their own body size as larger than the size they believe men would find most attractive (Cohn & Adler, 1992; Fallon & Rozin, 1985; Forbes et al., 2001). In contrast, men see their own body size as comparable to the size they believe women would find most attractive (Fallon & Rozin; Forbes et al.). Research has examined the extent to which these perceptions match opposite-sex peers’ actual preferences, and generally shows that both men and women misperceive the body size the opposite sex finds most attractive. That is, women tend to overestimate men’s desire for thinness, both when asked about men in general (Cohn & Adler; Fallon & Rozin; Forbes et al.), and about their romantic partner in particular (Markey et al., 2004), suggesting that women perceive that men have a stricter ideal of female beauty than they actually do. Men are also fairly poor judges of women’s preferences, with studies showing that they tend to exaggerate women’s preference for larger body sizes (Cohn & Adler; Forbes et al.). In summary, women tend to see their own size as discrepant from a stringent cultural ideal they believe their same- and opposite-sex peers see as most attractive. Men, on the other hand, tend to see their bodies as falling short of other men’s standards, but not women’s. Both men and women inaccurately perceive the body size their opposite-sex peers find most attractive.

Because much of this work is based on European Americans, the extent to which these same beliefs about body size are present among other ethnic groups is uncertain. Previous research suggests that African Americans in particular may be less prone to feeling discrepant from peers’ standards. For example, African American girls are less likely to experience
competition and jealousy among peers regarding appearance and have more flexible standards of beauty than European American girls (Parker et al., 1995). Also, African American men and women prefer larger body sizes than do European Americans (Aruguete, Nickleberry, & Yates, 2004); these preferences also apply to beliefs about the opposite-sex’s size, at least for African American men. That is, they tend to prefer larger and curvier female figures (Freedman, Carter, Sbrocco, & Gray, 2004), and are less concerned about dating women who have a larger than ideal body size compared to European American men (Powell & Kahn, 1995). These preferences may reflect the fact that larger body size is viewed as both healthy and more desirable in African American culture (Aruguete et al., 2004; Markey, 2004). Taken together, studies suggest that African Americans’ more flexible standards of beauty, as well as their preference for larger body sizes, may facilitate the belief that they have achieved their peers’ ideal body size.

More research is needed, however, to understand these beliefs among Latino Americans, a group that is examined less often. Because Latino Americans’ body image tends to resemble that of European Americans (Gillen & Lefkowitz, 2006; Miller et al., 2000), we would expect that they would have similar views about the size they think their peers find most attractive.

Perceived Body Size and Others’ Ratings of Body Size

Another important discrepancy that can be examined using figure drawings is the degree to which individuals’ perception of their own body size differs from others’ perception of their size. In using this method, individuals’ ratings of their own body size made on a figure drawing scale can be compared to ratings made on the same scale by independent observers. Few studies have used figure drawings for this purpose in spite of the fact that they are valid, reliable (M. A. Thompson & Gray, 1995), and fairly quick to administer. However, among the ones that have used them, one study of mostly European American adolescents showed that boys and girls rated
themselves as heavier than did adult observers (Phelps, Johnston, Jimenez, Wilczenski, & Andrea, 1993). Another study of African American adults found moderate to high correlations between self-ratings and independent observers’ ratings of body size, yet these associations were stronger for women than they were for men. The authors also found stronger associations between self-ratings of body size and BMI and percent body fat for women than for men (Pulvers et al., 2004). These studies suggest that individuals see their body size as more discrepant from cultural ideals than do independent observers, but that women’s views more closely resemble others’ perspectives and tend to match actual physical measurements more than do those of men.

**Implications for Body Image**

We have described several discrepancies—the difference between individuals’ perception of their own body size and of various ideal body sizes, and between their perception of their own size and independent observers’ ratings of their body size. It is important to examine these discrepancies because they may have important implications for body image.

In particular, research suggests that the greater the discrepancy, the more body image concerns. Self-discrepancy theory (Higgins, 1987) predicts that the more individuals believe their body size is discrepant from peers’ standards, the poorer their body image. Studies that suggest a link between beliefs about the importance of thinness to peers and body image concerns support this argument. For example, associations have been found between fear of negative evaluation by others, and drive for thinness and body dissatisfaction among college women (Gilbert & Meyer, 2005). Similarly, among female adolescents, associations have been found between believing thinness would improve relationships with male friends and body image concerns, body dissatisfaction, and restrained eating; the latter association was also significant
for female friends (Gerner & Wilson, 2005). Tantleff-Dunn and Thompson’s (1995) work also suggests that these concerns exist for college students within romantic relationships. Women who saw their bodies as more different from the size they thought their partner saw as ideal had more body image disturbance, bulimic symptoms, depression, and lower self-esteem. Men who saw their own bodies as more different from the size their partner actually saw as ideal were more likely to experience these outcomes. These studies suggest that women who believe their peers endorse a stringent ideal for them—an ideal they believe they fall short of—experience more body image concerns, eating problems, and other psychological disturbances. Because most of these studies are based on women, more research is needed to understand these processes in men.

In addition, research suggests that the greater the discrepancy between perceived body size and independent observers’ ratings of body size, the more body image disturbance. This argument is drawn from the literature on accuracy of perceived body size, which is based largely on samples of women with eating disorders. In these studies, participants use devices to adjust images to match their own perceived size (see J. K. Thompson et al., 1999). These studies show that women with eating disorders tend to overestimate the size of their bodies compared to women without these disorders (Williamson, Cubic, & Gleaves, 1993; Williamson, Davis, Goreczny, & Blouin, 1989), suggesting that body image disturbance, an important predictor of eating disorders (Polivy & Herman, 2002), may be associated with inaccurate perception. Yet, relatively few studies have examined body size perception in non-clinical samples, leaving little knowledge of whether these same processes exist in general populations.

Summary and Hypotheses
In the present study, we use figure drawings to test perceptions of body size in emerging adult college students. Specifically, we assess perceptions of one’s own body size, ideal size for oneself, and ideal size perceived to be held by same- and opposite-sex peers. To determine whether beliefs about opposite-sex peers’ ideal body size are accurate, we compare participants’ perceptions to the opposite-sex’s actual ratings. Further, we use figure drawings to compare individuals’ perceived body size to ratings made by independent observers. As a final step, we examine whether discrepancies between these multiple perceptions of body size have implications for body image and self-esteem. Unlike much previous work, our sample includes men and women who identify as African American, Latino American, and European American. Based on previous literature on self-discrepancy theory and on accuracy of body size perception, we make several predictions.

1. European American and Latina American women will be more dissatisfied with their bodies than will their male counterparts. There will be no difference in body dissatisfaction between African American men and women.

2. European American and Latina American women will be more likely to think their bodies differ from the size they believe their peers see as most attractive, as compared to their male counterparts. There will be no gender difference among African Americans.

3. European American and Latina American women will overestimate the opposite-sex’s desire for thinness, whereas their male counterparts will overestimate the opposite-sex’s desire for largeness. African Americans will be accurate in estimating the size the opposite-sex finds most attractive.

4. European American and Latina American women will rate their body size as more discrepant from independent observers than will their male peers. There will be no gender
difference among African Americans. Independent observers’ ratings of women’s body size will be associated with women’s BMI, whereas women’s ratings of their own size will not. Independent observers’ ratings of men’s size, and men’s ratings of their own size, will be associated with men’s BMI.

5. Individuals who perceive that their bodies are more different from the size they think their peers see as ideal, and whose ratings of their own body size differ to a greater extent from independent observers’ ratings, will have poorer body image and lower self-esteem.

Method

Participants

Respondents were first-year undergraduate students from a large Northeastern university who met our age criteria (ages 17 – 19). All African American and Latino American students, as well as a randomly selected group of European American students (9%) were contacted in September of their first semester. Of the 839 students contacted, 52% agreed to participate. Those who agreed to take part in the study completed a survey phase and received $25 for their time. In addition to completing this phase (Time 1 survey phase), a randomly selected subgroup of African American, Latino American, and European American students who were at least 18 years old were invited to participate in a second phase (Time 1 video phase), for which they were also compensated $25. In February of their second semester, all participants were invited to return for Time 2 of the study, and in September of their second year, were asked to return for Time 3. Once again, these time points included a survey phase and a video phase. At Time 2, students were paid $30 for participating in the survey phase, and $25 for taking part in the video phase, and at Time 3, $35 and $25, respectively. As part of the survey phase, students completed
a survey in a classroom setting. For the video phase, students participated in videotaped tasks in a laboratory setting and then completed a survey.

Data presented in the current study are based on the students who participated in the Time 2 video phase. To determine if there were any attrition biases, several analyses were performed. The first set of analyses examined attrition from the Time 1 video phase \((N = 182)\) to the Time 2 video phase \((N = 170; \text{retention rate of 93\%})\). Of those students who did not return, 5 refused to participate, 3 were unreachable, 3 were no longer students at the university or transferred to another campus, 1 was deceased, and 1 had scheduling difficulties. We compared individuals who participated in the Time 2 video phase to those who dropped out from the video portion of the study after Time 1. Groups were compared on demographic characteristics, body image, and self-esteem. Three chi-squares and 8 t-tests were performed, and none were significant.

The second set of analyses was performed to determine if there were any selection biases in participating in the video phase of the study. The average amount of time between the Time 2 survey phase \((N = 414)\) and Time 2 video phase was approximately 2 weeks \((M = 15.9 \text{ days}; SD = 10.1)\). Those who participated in the video phase were compared to those who only participated in the Time 2 survey phase on demographic characteristics, body image, and self-esteem. Three chi-square tests and 8 t-tests were performed, and 3 were significant. Those who did not participate in the video phase were more likely to be African American or Latino American \((\chi^2 (2, 414) = 12.9, p < .01)\), had mothers with lower levels of education \((t = 2.3; p < .05)\), and were younger \((t = 2.0; p = .05)\). Students who were not in the video study were younger because 17 year olds were excluded from participating in this phase due to IRB regulations.
In addition to using the 170 participants’ data from the Time 2 video phase, we also draw on measures they completed at the Time 3 survey phase. Thus, the third set of attrition analyses examines any biases in attrition from the Time 2 video phase to the Time 3 survey phase. The average time between these phases was 6.6 months ($SD = 0.4$). Most participants ($N = 164$) from the Time 2 video phase returned for the Time 3 survey phase, yielding a retention rate of 97%. All participants who did not return were no longer enrolled at the university. Three chi-square tests and 8 t-tests were performed to compare those who failed to return after the Time 2 video phase to those who came back for the Time 3 survey phase on demographic characteristics, body image, and self-esteem. The only significant difference was in father’s level of education ($t = 6.7; p < .001$). Those who failed to return for the Time 3 survey phase had fathers with higher levels of education compared to those who participated in this phase.

At the Time 2 video phase, participants ranged in age from 18 to 20 years ($M = 19.0; SD = 0.38$), and 50% were women. Twenty six percent identified as African American, 25% as Latino American, and 49% as European American. Ninety seven percent identified as heterosexual, 2% as bisexual, and 1% as other (e.g., “sexuality is flowing”).

Procedure

As part of the Time 2 video phase, students were invited into a research lab to complete several tasks in front of a video camera with an opposite-sex partner of the same ethnicity. Because the primary goal of the study was to examine gender differences in behavior, we matched students on ethnicity to discount any possible group differences based on the ethnic composition of the dyad. Students were paired with a different opposite-sex partner at each time point. After participating in the videotaped tasks, students separately completed a questionnaire. As part of this survey, they reported how well they knew their partner. Eighty one percent of
pairs reported that they had just met that day, 5% had met once before, 1% had met a couple of
times, 11% were acquaintances, and 2% were close friends. Data in the current study are based
on the survey they completed after participating in the videotaped tasks, but not on the actual
tasks themselves.

Measures

All measures were completed during the Time 2 video phase, with the exception of the
body image and self-esteem measures, which were completed during the Time 3 survey phase.

Body mass index (BMI). Participants were asked to report their height and weight. Their
BMI was calculated using the English formula because data were reported in inches and pounds
(see CDC, 2006, for formula). Self-report of height and weight has been found to correlate
highly with measured height and weight (e.g., Brooks-Gunn, Warren, Rosso, & Gargiulo, 1987).

The Contour Drawing Rating Scale (CDRS). The CDRS (M. A. Thompson & Gray,
1995) consists of a series of nine silhouettes, numbered from 1 to 9, that increase incrementally
in size from extremely thin to very heavy. Group discussions with undergraduates at the same
university indicated that the heads and faces of the figures were perceived as European
American. Thus, we decided to remove the heads because we wanted all participants to be able
to identify equally with the figures. Patel and Gray (2001) also removed the heads of the figures
in a study of African American undergraduates due to similar concerns. A copy of these figure
drawings is included in Figure 1.1a (female version), and in Figure 1.1b (male version).

Participants were given same-gender figures and asked to indicate: (1) the figure that
looks most like their own (perceived body size); (2) the figure they would most like to look like
(own ideal); (3) the figure they think most men/women would want to look like (same-sex ideal);
and (4) the figure they think most men/women find most attractive (opposite-sex ideal). Based
on viewing figures of the opposite-sex, participants indicated (5) the figure they found most attractive (opposite-sex attractive).

From these ratings, we calculated three difference scores: (1) body dissatisfaction (own ideal – perceived body size); (2) same-sex peer standards (same-sex ideal – perceived body size); and (3) opposite-sex standards (opposite-sex ideal – perceived body size). A negative score indicates that the ideal is smaller, a score of zero indicates that the ideal is the same, and a positive score indicates that the ideal is larger, than perceived body size. Based on these scores, we created three groups. Participants who received a negative score were placed in the want/should be smaller group, those who received a score of zero were placed in the no difference group, and those who received a positive score were placed in the want/should be larger group.

The CDRS was also used to obtain multiple independent ratings on participants’ body size. Students were presented with figures of the opposite-sex and were asked to indicate which figure best represented that of their opposite-sex partner (partner rating). To prevent awareness of being rated by their partner, students were asked to sit in separate rooms or facing away from one another.

Participants were also discreetly rated by project staff on their body size while staff waited for them to complete the survey (interviewer rating). Each staff member was paired with another person on the staff who entered the room briefly. This second staff member independently rated both students’ body size after leaving the room (21% of sessions were double-rated). For participants who were double-rated, the average of the two staff members’ ratings was used.
To ensure that all staff members would rate body size in similar ways, they participated in training sessions. The first set of training sessions was held with the first author before Time 1 for four staff members, and the second, before Time 2, for the one new staff member. In total, there were six interviewers (three pairs) at Time 2 who rated body size. As part of the training sessions, staff members went to public areas on campus where students’ body size could easily be observed. Students who were not known to staff members and who were diverse in their body size were independently and discreetly rated on their body size. After each rating, disagreements were discussed and a consensus was reached. Staff members completed at least 10 ratings of men, and 10 ratings of women over at least one training session. Reliability (ICCs > .70) in all training sessions reached the criterion rating of .70. Reliability of staff members’ body size ratings during the actual sessions ranged from ICC = .72 to .92 for men (Average ICC = .83), and ICC = .68 to .90 for women (Average ICC = .79).

We used these independent ratings of participants’ body size to calculate two difference scores: (1) partner rating vs. perceived body size \((\text{partner rating} - \text{perceived body size})\); and (2) interviewer rating vs. perceived body size \((\text{interviewer rating} - \text{perceived body size})\). A negative score indicates that the partner’s/interviewer’s rating is smaller, a score of zero indicates that their rating is the same, and a positive score indicates that the other’s rating is larger, than perceived body size. Based on these scores, we created 3 groups: rater thinks smaller (negative scores), no difference (zero scores), and rater thinks larger (positive scores). Mean scores on all body size ratings on the CDRS are presented in Table 1.1, separately by gender.

M. A. Thompson and Gray (1995) report good 1-week test-retest reliability for perceived body size in a sample of college women \((r = .78)\). They also established the validity of this measure for assessing body size. They found fairly robust associations between self-perceived
body size and self-reported weight \((r = .71)\), and between self-perceived body size and BMI \((r = .59)\). Associations in the present study were similar (self-perceived body size and self-reported weight, \(r = .67\); self-perceived body size and BMI, \(r = .75\)). Test-retest reliability was also good from Time 1 to Time 2 for perceived body size \((r = .83)\).

*Body image.* Body image was assessed by three subscales from the Multidimensional Body-Self Relations Questionnaire (Cash, 2000). *Appearance evaluation* is a 7-item measure that assesses general satisfaction with overall appearance (e.g., “Most people would consider me good-looking”). *Appearance orientation* is a 12-item scale that measures cognitive and behavioral investment in appearance (e.g., “It is important that I always look good”). Participants rate their responses to these items on a scale ranging from 1 = definitely disagree to 5 = definitely agree. *Body areas satisfaction* is a 9-item scale that assesses satisfaction with particular areas of the body (e.g., “hair”, “upper torso”), with responses ranging from 1 = very dissatisfied to 5 = very satisfied. Reliability in the present study was satisfactory (appearance orientation, \(\alpha = .88\); appearance evaluation, \(\alpha = .90\); body areas satisfaction, \(\alpha = .81\)), and compared to that reported by Cash.

*Self-esteem.* Self-esteem was assessed by the Rosenberg Self-Esteem Scale (Rosenberg, 1965). This scale assesses general feelings of self-worth and self-acceptance (positive attributes), as well as self-contempt (negative attributes) (e.g., “I feel that I have a number of good qualities”). It has 10 items on which participants rate their responses on a scale from 1 = strongly disagree to 4 = strongly agree. Reliability in the current study \((\alpha = .88)\) was comparable to that reported by Rosenberg.

**Results**

*Preliminary Analyses*
Before addressing our hypotheses, we performed a series of descriptive statistics to capture participants’ actual body size because body size perceptions should be addressed within this context. First, we examined participants’ weight status using the CDC’s (2006) BMI categories (below 18.5 = underweight; 18.5 to 24.9 = normal; 25.0 to 29.9 = overweight; 30.0 and above = obese). Based on these criteria, 3% of participants were underweight, 63% were normal weight, 27% were overweight, and 8% were obese. The proportion of individuals in these weight status groups did not differ significantly by gender $\chi^2 (3, 169) = 6.98, p > .05$, nor by ethnicity $\chi^2 (6, 169) = 9.86, p > .05$. However, results did show significant differences when using BMI as a continuous variable in a 2 (gender) x 3 (ethnicity) ANOVA. Men ($M = 24.6, SD = 0.5$) had a significantly larger BMI than women ($M = 23.3, SD = 0.5; F(1,67) = 4.3, p < .05$). There were no ethnic differences in BMI, and the interaction between gender and ethnicity was not significant.

Second, we were interested in understanding whether the discrepancy between perceived body size and ideal body size (i.e., body dissatisfaction) differed by weight status and gender. Thus, we performed a 2 (gender) x 4 (weight status) ANOVA on body dissatisfaction. Results show significant main effects for gender $F(1,20) = 25.3, p < .001$ and weight status $F(3,45) = 19.5, p < .001$, but no significant two-way interactions. Women ($M = -1.20, SD = 0.16$) were more dissatisfied with their bodies than were men ($M = -0.64, SD = 0.12$). Tukey tests were conducted to follow-up on the significant main effect for weight status. Results showed that the normal weight group ($M = -0.42, SD = 0.09$) did not differ from the underweight group ($M = 0.20, SD = 0.39$) in body dissatisfaction ($p > .05$). However, the normal weight group was less dissatisfied than both the overweight group ($M = -1.36, SD = 0.13$), and the obese group ($M = -1.68, SD = 0.26; ps \leq .001$). The overweight and obese groups did not differ significantly from
one another ($p > .05$). Figure 2.1 illustrates these patterns.

**Perceived Body Size and Ideal Body Sizes**

*Body dissatisfaction.* Our first hypothesis was that European American and Latina American women would be more dissatisfied with their bodies than would their male peers, but that there would be no gender difference in body dissatisfaction among African Americans. To test this hypothesis, we performed a series of chi-squares, separately by ethnic group. The goal of these chi-squares was to test whether there were gender differences in the proportion of individuals who fell into 3 groups: those who wanted to be smaller, those who were satisfied with their bodies, and those who wanted to be larger. There were significant gender differences in body dissatisfaction among European Americans and Latino Americans, but not among African Americans (see Table 2.1). Among European Americans and Latino Americans, most women desired a thinner figure, whereas most European American men were satisfied or wanted to be smaller, and most Latino American men were divided in wanting to be smaller or larger. Notably, not a single European American woman expressed a desire to be larger. These findings support our first hypothesis.

*Same-sex peer ideal.* Our second hypothesis was that European American and Latina American women would be more likely to believe that their bodies differ from the size they think their peers find most attractive, as compared to their male peers. We also predicted that there would be no gender difference for African Americans. To test this hypothesis, chi-squares were performed in the same way as described in hypothesis 1. Results showed that there were gender differences in all three ethnic groups (see Table 2.1). Most women indicated that other women’s ideal body size was thinner than their own body size. Note again that no European American women thought that their female peers’ ideal body size was larger than their own size. On the
other hand, most of the men were split—though not necessarily evenly—in whether they believed other men’s ideal body size was smaller or larger than their own body size. That is, African American and European American men believed that other men’s preference was more in the direction of thinness than largeness, whereas Latino American men were fairly evenly split. These findings support our second hypothesis for European Americans and Latino Americans, but not for African Americans.

*Opposite-sex peer ideal.* For the analysis on opposite-sex peers, there were significant gender differences among European Americans and Latino Americans, but not African Americans (see Table 2.1). Most European American and Latina American women thought that the size men found most attractive was smaller than their own size, but most of their male counterparts were divided in their beliefs about whether the size most attractive to women was smaller or larger than their own body size. Although Latino American men were evenly divided in these beliefs, the European American men believed women had a preference for thinness than believed they preferred largeness. These findings support our second hypothesis.

*Accuracy in perceiving opposite-sex peer ideal.* We also tested the extent to which individuals’ perception of their opposite-sex peers’ ideal body size was accurate. We expected that European American and Latina American women would overestimate men’s preference for thinness in women, and their male counterparts would overestimate women’s preference for largeness in men. African American men and women, on the other hand, would accurately estimate the size their opposite sex peers find most attractive. To test this hypothesis, we performed t-tests, separately by ethnic group, comparing women’s scores on *opposite-sex ideal* to men’s scores on *opposite-sex attractive*, and men’s scores on *opposite-sex ideal* to women’s scores on *opposite-sex attractive*. Results were significant for European American and Latina
American women, but not African American women. These findings indicate that European American and Latina American women overestimated men’s preference for thinness, whereas African American women did not (see Table 3.1). Results were not significant for men in any ethnic group, indicating that they were fairly accurate in estimating the size women found most attractive (see Table 3.1). These results support our hypothesis for women and African American men, but not for the other groups of men.

**Perceived Body Size and Others’ Ratings of Body Size**

In our fourth hypothesis, we predicted that European American and Latina American women’s ratings of their own body size would be more different from the ratings of independent observers, as compared to their male peers. We expected to find no gender differences among African Americans. To test this hypothesis, we performed chi-squares, separately by ethnic group, to compare the proportion of men and women who fell into three groups: those who were rated by others as smaller than they rated themselves, those who rated themselves the same size as did others, and those who were rated by others as larger than they rated themselves. Analyses were first performed on ratings made by conversational partners, and indicated that there were no significant differences in any ethnic group (see Table 4.1). That is, men and women were similar in the degree to which ratings of their own body size differed from those of their conversational partners. Most men (around 70%) and women (around 60%) rated their body size differently than did their partners, but were both divided in whether their ratings were smaller or larger. Analyses were then performed on ratings made by interviewers. Results indicated a marginally significant difference among European Americans, but not among African Americans or Latino Americans. European American women who rated their body size differently than did the interviewers were just as likely to rate themselves as smaller or larger, but European American
men who rated their size differently than the interviewers tended to rate themselves larger rather than smaller.

Also as part of this hypothesis, we predicted that independent observers’ ratings of women’s size would more accurately reflect women’s BMI than would women’s own ratings of their size. For men, we expected that others’ ratings, as well as men’s own ratings, would be equally accurate at reflecting men’s BMI. Correlations were performed, separately by gender, to test this hypothesis (see Table 5.1). Results show that for both men and women, all three raters’ perceptions were similarly associated with BMI. Note also that for both male and female participants, their perception of their own body size was associated with partners’ and interviewers’ perceptions. These findings do not support our hypothesis.

Associations between Discrepancies in Body Size Perception, and Body Image and Self-Esteem

The fifth hypothesis was that those who had greater discrepancies between their perception of their own size and of others’ ideal sizes, and between their own size and independent observers’ ratings of their body size, would report poorer body image and lower self-esteem. To address this hypothesis, we first calculated several discrepancy scores. These scores represent same-sex standards (same-sex ideal – perceived body size), opposite-sex standards (opposite-sex ideal – perceived body size), perceived body size vs. partner rating (partner rating – perceived body size), and perceived body size vs. interviewer rating (interviewer rating – perceived body size). We used absolute value of these scores because they may be better for capturing discrepancies between body size ratings in men. The cultural ideal for men is both thinness and muscularity (Olivardia, 2002), suggesting that men’s perceptions and desires are just as likely to be toward the smaller as toward the larger end of the CDRS. Using raw scores, then, may mask these trends in men. Next, we performed correlations between
these discrepancy scores, and body image and self-esteem (measured at Time 3), separately by
gender (see Table 6.1). Note that we did not include the discrepancy score (own ideal –
perceived body size) as a correlate because it is considered an index of body dissatisfaction
(Williamson, Gleaves et al., 1993), and therefore, would not be substantively distinct from other
measures of body image. Results indicate that for both men and women, the most consistent
correlate with body image and self-esteem was the absolute value of (opposite-sex ideal –
perceived body size), and to a lesser extent, the absolute value of (same-sex ideal – perceived
body size). The more different individuals thought their own body size was from the size they
thought their peers saw as ideal, the poorer their body image. Fewer associations emerged for
self-esteem.

In addition to these bivariate associations, we were interested in understanding the extent
to which these various discrepancy indices were related to body image and self-esteem in the
context of other discrepancy scores. To that end, we performed four regressions, with Time 3
body image variables (appearance orientation, appearance evaluation, body areas satisfaction)
and self-esteem as the outcome variables. In each regression, gender (1 = male, 2 = female),
etnicity (1 = African American, 0 = European American and Latino American) and BMI were
entered as controls in Step 1. Ethnicity was coded so that African Americans could be compared
to European Americans and Latino Americans, because research has shown that African
Americans have more positive views of their appearance than do the latter two groups (Gillen &
Lefkowitz, 2006; Story et al., 1995). In Step 2, we entered the absolute value of four discrepancy
scores: (same-sex ideal – perceived body size), (opposite-sex ideal – perceived body size),
(partner rating – perceived body size), and (interviewer rating – perceived body size). In Step 3,
we entered the interactions between each of these four discrepancy scores and gender.
In the model with appearance orientation as the outcome, Step 3 added a marginally significant amount of variance (see Table 7.1). Because it is difficult to detect interaction effects in regression models (Jaccard & Wan, 1995; McClelland & Judd, 1993), we decided to interpret marginally significant steps that included interactions. In this step, \((\text{opposite-sex ideal} - \text{perceived body size})\), and the interaction between this variable and gender were marginally significant predictors. To follow up on this interaction, we performed regressions separately by gender, omitting both gender and interaction terms. Results were marginally significant for men \((\beta = -.30; \ p = .08)\) but not for women \((\beta = .01; \ p > .05)\). Men who saw their own size as closer to the size they thought women found most attractive were more oriented toward their appearance.

In the models with appearance evaluation, body areas satisfaction, and self-esteem as the outcomes, Step 2 added a significant amount of variance, but Step 3 did not; therefore, we interpret Step 2. In this step for all three models, there was a significant main effect for \((\text{opposite-sex ideal} - \text{perceived body size})\). Individuals who saw their own body size as closer to the size they thought the opposite-sex would find most attractive evaluated their appearance in a more positive way, were more satisfied with areas of their body, and had higher self-esteem.

Discussion

In the present study we assessed emerging adults’ perceptions of the body, including views of their own body size, the size they consider ideal for themselves, and the size they believe their peers see as most attractive. Weight status, gender, and ethnicity played an important role in perceptions of the body. For example, most European American and Latina American women desired a thinner body size, and perceived that their peers wanted them to be thinner. Among their male counterparts, there was less of a consensus about these perceived ideal body sizes, with some thinking that these ideals were smaller, and some believing they
were larger, than their own size. These gender differences were less distinct among African Americans. Contrary to popular belief and to past research, women did not tend to see their own body size as larger than others did. Furthermore, women’s ratings of their own size corresponded to their BMI in much the same way as did others’ ratings. The most important discrepancy for predicting body image and self-esteem was the extent to which individuals saw their own bodies as deviating from the size they believed their opposite-sex peers saw as most attractive.

Perceived Body Size and Ideal Body Sizes

It is important to understand perceptions of the body in the context of individuals’ actual body size. Thus, we examined whether body dissatisfaction differed by weight status and gender. Across all weight groups, women were more dissatisfied than were men, underscoring previous research that found that a number of women are unhappy with their bodies, regardless of their actual size (see Striegel-Moore, Silberstein, & Rodin, 1986). These findings suggest that there is a great deal of pressure on women to achieve a thin ideal, an ideal that may be out of reach even for normal weight women. Further, results demonstrate that normal weight individuals were less dissatisfied than were overweight and obese individuals, who did not differ. Given the pervasive obesity stigma in the US (Carr & Friedman, 2005), it is reasonable that those who are larger in size would be unhappier with their bodies. However, we question whether their dissatisfaction is necessarily detrimental, given the health risks associated with overweight and obesity (Committee on Prevention of Obesity in Children and Youth, 2005). Heinberg, Thompson, and Matzon (2001) have suggested that moderate levels of body dissatisfaction might motivate individuals of average or above average weight to engage in healthy behaviors. Although we cannot specifically determine cutoffs for low, moderate, or high dissatisfaction here, we
nonetheless argue that higher levels of dissatisfaction in the overweight and obese groups may actually be beneficial for their health.

Further, results showed that there were gender differences in body dissatisfaction among European Americans and Latino Americans. Most women wanted to be thinner, and men were a bit more divided in their desire to be smaller or bigger, with a stronger preference for thinness than for largeness among European American men, and a preference that was evenly divided between these among Latino American men. Prior work on mostly European Americans show similar findings for women, but indicate more of a balance in men’s desire to be smaller or larger (Cohn & Adler, 1992). Current findings suggest a pervasive thin ideal among European American and Latina American women, and a desire among their male peers to be either smaller or larger, perhaps reflecting the importance of a lean and muscular male ideal, with leanness carrying relatively more importance for European American men. There were no significant gender differences, however, among African Americans. Although the dissatisfied African American women showed a preference for thinness, and the dissatisfied African American men, a desire for both thinness and largeness, there were a comparable number of these men and women who were satisfied with their bodies. Thus, African Americans do demonstrate a desire to meet the cultural female and male ideals of beauty to some extent, but a considerable number are also satisfied. This finding may reflect both African American men’s and women’s preference for a larger body size (Aruguete et al., 2004; Markey, 2004), a body size ideal that may be easier to achieve.

We were also interested in understanding the extent to which individuals thought their own body size differed from the size they believed their peers saw as most attractive. Similar to others’ findings (Forbes et al., 2001), most women thought their own body size was larger than
the size other women would see as ideal. Studies of mostly European American female peer
groups suggest that these women perceive thinness to be important to their peers (Schulken et al.,
1997; Wertheim et al., 1997). Research on Latina American women indicating that they have
similar levels of body image disturbance to European American women suggests that they may
share the same values (Gillen & Lefkowitz, 2006). Based on prior work (Parker et al., 1995), we
were surprised that African American women had these same perceptions about their female
peers. It is possible that because they are at a predominantly European American university, they
may be thinking of their European American female peers’ preferences.

Also similar to prior work (Cohn & Adler, 1992; Fallon & Rozin, 1985), European
American and Latina American women thought that their own body size was larger than the size
they believed men would find most attractive. Women may have these beliefs because men are
more concerned than women about the physical attractiveness of their partners (Feingold, 1990),
and European American men in particular (relative to African American men) express concern
with dating women who are larger than ideal (Powell & Kahn, 1995). Traditional gender role
norms in Latino culture (Gomez & Marin, 1996) may further contribute to Latina American
women’s beliefs that their male counterparts not only expect them to resemble the “ideal”
woman behaviorally, but physically as well. Although many African American women held
these same beliefs, a number also thought their body size was smaller than the size they believed
men would find most attractive. These beliefs may reflect African American men’s preference
for larger yet curvier female body figures (Freedman et al., 2004).

When comparing women’s beliefs to men’s actual preferences, results not surprisingly
showed that European American women and Latina American women overestimated men’s
preference for thinness, whereas African American women did not. Findings reflect prior
research on European American and African American women (Cohn & Adler, 1992; Forbes et al., 2001; Patel & Gray, 2001) and suggest that Latina American women, a group that has not been examined as often, have beliefs that more closely resemble those of their European American female peers. These findings may reflect the differential pressure these women feel from their male counterparts to embody the thin ideal of beauty, which as noted, seems to be greater for European American and Latina American women.

Contrary to women, men were more divided in whether they thought their own body size was smaller or larger than the size they believed their peers would find most attractive. This pattern was true for their perceptions of both same-sex and opposite-sex peers’ preferences. Prior research shows that men believe their same-sex peers prefer a body size larger than their own (Forbes et al., 2001), but see their own body size as comparable to the size they think women would find most attractive (Fallon & Rozin, 1985; Forbes et al.). Current findings may differ because they are more recent by at least several years, and thus may reflect the importance of leanness and largeness in the ideal male physique (Olivardia, 2002). Thus, as for women, results suggest that men do indeed perceive a cultural ideal of attractiveness among peers, and that further work should explore these beliefs.

We also examined the extent to which men correctly estimated the body size women found most attractive. All groups of men were accurate in estimating women’s preferences. These findings were different than previous studies which found that men overestimated women’s preference for largeness (Cohn & Adler, 1992; Forbes et al., 2001). Results of the current study may reflect that fact that although there is an emerging ideal for men characterized by leanness and largeness, the pressure to achieve this ideal is not as strong as the pressure on women to achieve the thin ideal. That is, it may be that perceiving less pressure to look a
particular way may promote less harsh—and more accurate—judgments of the size the opposite-
sex finds most attractive.

**Perceived Body Size and Others’ Ratings of Body Size**

We also compared participants’ ratings of their own body size to those made by an opposite-sex conversational partner and an interviewer. Contrary to our expectations, women in the current study did not tend to see themselves as larger than did these raters. These findings differ from studies of women with eating disorders, which suggest that poor body image may be associated with inaccurate body size perception (Williamson, Cubic et al., 1993; Williamson et al., 1989), but are similar to prior research on women and their romantic partners (Markey et al., 2004; Tantleff-Dunn & Thompson, 1995). Although women in the current study tended to see themselves as falling short of their own and others’ ideal body sizes, they were fairly accurate at estimating their own body size, suggesting that these constructs are in fact distinct. It is important to note that we are not able to conclude with certainty whose ratings more accurately reflected women’s actual body size, but we can offer some insight. Women’s ratings of their own size were associated with their partner’s and interviewers’ ratings, and all three raters’ assessments were associated with BMI. Thus, it seems that both women and independent observers see women’s body size in a similar way, and these viewpoints appear to be fairly accurate.

Patterns for men did not differ significantly from those of women. The only exception was for European American men, who had a marginally different pattern than their female counterparts because they had a tendency to view their size as larger than did the interviewers. This finding is similar to previous work on mostly European Americans, which showed that men saw their own size as larger than did their romantic partner (Tantleff-Dunn & Thompson, 1995),
and larger than did interviewers (Phelps et al., 1993). This pattern may be due to the gender and ethnicity of the interviewers (all women, mostly European American), factors that have been noted to potentially influence observer ratings (Davidson, MacGregor, MacLean, McDermott, Farquharson, 1996; Melby, Hoyt, & Bryant, 2003). Interviewers tend to rate members of their own ethnic group less favorably on various behaviors than those of other ethnic groups (Melby et al., 2003). Here, this tendency seems to have emerged only for the men in interviewers’ own ethnic group, perhaps because they may have felt greater sensitivity toward other women when dealing with issues of body size. In spite of this marginal trend, men generally saw their own body size in a similar way as did independent observers, and men’s ratings and those of independent observers were associated with men’s BMI.

Associations between Discrepancies in Body Size Perception, and Body Image and Self-Esteem

What are the implications of these discrepancies in body size perception for body image and self-esteem? Results showed that the discrepancy between perceived body size and the size believed to be ideal for opposite-sex peers was the most important predictor of body image and self-esteem. This discrepancy was more meaningful for body image and self-esteem than was feeling discrepant from same-sex peers’ standards, and assessing one’s own body size differently than independent observers. Specifically, men (but not women) who perceived that their bodies were closer to the size they believed women found most attractive were more oriented toward their appearance. Social norms dictate that women should be invested in their appearance (Striegel-Moore et al., 1986). Because of this expectation and the narrow cultural ideal of beauty for women, women who invest in their appearance may not necessarily feel any closer to peers’ standards of attractiveness. However, men who invest in their looks even a small bit may feel more confident that they have met women’s standards.
Results also showed that both men and women who perceived that their bodies were closer to the size they believe the opposite-sex views as most attractive evaluated their appearance in a more positive way, were more satisfied with areas of their body, and had higher self-esteem. Similar findings have been reported for women and opposite-sex romantic partners (Tantleff-Dunn & Thompson, 1995). Most participants in the current study were heterosexual, and therefore, are likely concerned over how their bodies “measure up” to the size the opposite-sex finds most attractive. This desire may be particularly intense for the participants in the current study because they are simultaneously entering emerging adulthood, a period marked by exploration in romantic relationships (Arnett, 2000), and their first year of college, a context that may encourage this exploration because they have recently moved out of their parents’ homes (Lefkowitz & Gillen, 2005). Within this new context, they are living with potential dating partners in dormitories for perhaps the first time, which may heighten their concern for how these individuals view them. It is reasonable, then, that students who feel that their bodies more closely approximate the size they think the opposite-sex finds desirable would feel more positively about their appearance in particular, and their overall selves in general.

Limitations and Conclusion

Before addressing our conclusions, it is important to point out several study limitations. One issue is that the figure drawing measure we used represented gradual changes in weight, but not muscle. Given that weight is more central to the female ideal and muscle to the male ideal, it is possible that fewer gender differences would have emerged had another measure been used. It should also be noted that the university and the community it resides in is largely European American. It is possible that ethnic minority students who choose to attend this university may have been more likely to have grown up in predominantly European American communities as
compared to their counterparts who attend universities with a greater proportion of ethnic minority students. Thus, ethnic minority students in the current study may have perceptions of body size that more closely resemble those of their European American peers, suggesting that more ethnic differences might have been found had this study been conducted at a university with a more ethnically diverse student body. Given these potential differences, findings should not be generalized to ethnic minority students at these other higher educational institutions.

In spite of these limitations, there are several important findings that emerged from this study. Women were more dissatisfied with their bodies than were men, regardless of their actual body size. Individuals who were overweight or obese were more dissatisfied than normal weight individuals. Given the health risks associated with obesity, it appears that the “correct” individuals are dissatisfied, and that this dissatisfaction might even serve as a motivating force for them to engage in more healthful behaviors (Heinberg et al., 2001). Also, most individuals perceived that they fall short of the body size they think their peers find most attractive. Women perceived that their peers see a thin figure as ideal, whereas men believed that either a smaller or larger physique would be most attractive to their peers, perhaps reflecting the male ideal of leanness and muscularity. Feeling more discrepant from the size perceived to be most attractive to opposite-sex peers was associated with poorer body image and lower self-esteem. In spite of these negative perceptions, both men and women were fairly accurate at estimating their own body size. Thus, results do not support the conventional belief that women see their bodies as larger than others do. Findings from the present study contribute to the literature because few studies have captured these multiple perceptions of body size in a single study, particularly in a multiethnic population. Future studies should continue to use figure drawings in these various
ways because, as the current study demonstrates, their utility goes far beyond the constructs they are traditionally used to capture.
References


Table 1.1

*Mean scores on all body size ratings, separately by gender*

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><em>M (SD)</em></td>
<td><em>M (SD)</em></td>
</tr>
<tr>
<td>Perceived body size</td>
<td>5.48 (1.14)</td>
<td>5.20 (1.50)</td>
</tr>
<tr>
<td>Own ideal</td>
<td>5.22 (0.56)</td>
<td>4.04 (1.10)</td>
</tr>
<tr>
<td>Same-sex ideal</td>
<td>5.21 (0.64)</td>
<td>3.40 (0.89)</td>
</tr>
<tr>
<td>Opposite-sex ideal</td>
<td>5.18 (0.57)</td>
<td>3.81 (0.96)</td>
</tr>
<tr>
<td>Partner rating</td>
<td>5.23 (1.29)</td>
<td>5.01 (1.61)</td>
</tr>
<tr>
<td>Interviewer rating</td>
<td>5.11 (1.26)</td>
<td>5.12 (1.40)</td>
</tr>
<tr>
<td>Opposite-sex attractive</td>
<td>4.49 (0.86)</td>
<td>5.26 (0.60)</td>
</tr>
</tbody>
</table>

*Note.* Responses range from 1 (smallest) to 9 (largest). Due to missing data, sample size for men ranged from *N* = 84 to 85, and for women, *N* = 83 to 85.
Table 2.1

*Gender differences in the proportion of emerging adults in 3 self-ideal discrepancy groups, separately by ethnicity*

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
<th>Chi-square</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Want/should be smaller</td>
<td>No difference</td>
<td>Want/should be larger</td>
</tr>
<tr>
<td><strong>Body dissatisfaction</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>European American</td>
<td>.43</td>
<td>.43</td>
<td>.14</td>
</tr>
<tr>
<td>Latino American</td>
<td>.43</td>
<td>.19</td>
<td>.38</td>
</tr>
<tr>
<td>African American</td>
<td>.36</td>
<td>.41</td>
<td>.23</td>
</tr>
<tr>
<td><strong>Same-sex peer standards</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>European American</td>
<td>.45</td>
<td>.26</td>
<td>.29</td>
</tr>
<tr>
<td>Latino American</td>
<td>.43</td>
<td>.14</td>
<td>.43</td>
</tr>
<tr>
<td>African American</td>
<td>.41</td>
<td>.32</td>
<td>.27</td>
</tr>
<tr>
<td><strong>Opposite-sex peer standards</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>European American</td>
<td>.45</td>
<td>.33</td>
<td>.21</td>
</tr>
<tr>
<td>Latino American</td>
<td>.38</td>
<td>.19</td>
<td>.43</td>
</tr>
<tr>
<td>African American</td>
<td>.41</td>
<td>.36</td>
<td>.23</td>
</tr>
</tbody>
</table>

*Note.* Due to missing data, sample sizes were: European Americans (men, N = 42; women, N = 40 – 41), Latino Americans (men, N = 21; women, N = 21), and African Americans (men, N = 22; women, N = 21 – 22). *p < .05; **p < .01; ***p < .001
Table 3.1

*Gender differences in perceiving the body size the opposite-sex finds most attractive*

<table>
<thead>
<tr>
<th>Ethnic group</th>
<th>Opposite-sex ideal <em>M(SD)</em></th>
<th>Opposite-sex attractive <em>M (SD)</em></th>
<th><em>t</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>European Americans</td>
<td>5.07 (.48)</td>
<td>5.10 (.43)</td>
<td>0.2</td>
</tr>
<tr>
<td>Latino Americans</td>
<td>5.33 (.58)</td>
<td>5.24 (.62)</td>
<td>0.5</td>
</tr>
<tr>
<td>African Americans</td>
<td>5.23 (.69)</td>
<td>5.60 (.73)</td>
<td>1.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ethnic group</th>
<th>Opposite-sex ideal <em>M(SD)</em></th>
<th>Opposite-sex attractive <em>M (SD)</em></th>
<th><em>t</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>European Americans</td>
<td>3.71 (.94)</td>
<td>4.36 (.82)</td>
<td>3.3**</td>
</tr>
<tr>
<td>Latino Americans</td>
<td>3.52 (.93)</td>
<td>4.50 (.83)</td>
<td>3.5**</td>
</tr>
<tr>
<td>African Americans</td>
<td>4.29 (.90)</td>
<td>4.73 (.94)</td>
<td>1.6</td>
</tr>
</tbody>
</table>

*Note.* Responses range from 1 (smallest) to 9 (largest). Due to missing data, sample sizes were: women (European American, *N* = 42; Latina American, *N* = 20 – 21; African American, *N* = 21 – 22), and men (European American, *N* = 42; Latino American, *N* = 21; African American, *N* = 22).

**p < .01
Table 4.1

*Gender differences in the proportion of emerging adults in 3 self-other rating discrepancy groups, separately by ethnicity*

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
<th>Chi-Square</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rater thinks</td>
<td>No difference</td>
<td>Rater thinks</td>
</tr>
<tr>
<td>Perceived body size vs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>partner rating</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>European American</td>
<td>.44</td>
<td>.44</td>
<td>.12</td>
</tr>
<tr>
<td>Latino American</td>
<td>.43</td>
<td>.38</td>
<td>.19</td>
</tr>
<tr>
<td>African American</td>
<td>.36</td>
<td>.36</td>
<td>.27</td>
</tr>
<tr>
<td>Perceived body size vs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>interviewer rating</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>European American</td>
<td>.45</td>
<td>.45</td>
<td>.10</td>
</tr>
<tr>
<td>Latino American</td>
<td>.43</td>
<td>.48</td>
<td>.10</td>
</tr>
<tr>
<td>African American</td>
<td>.32</td>
<td>.50</td>
<td>.18</td>
</tr>
</tbody>
</table>

*Note. Due to missing data, sample sizes were: European Americans (men, N = 41 – 42; women, N = 40 – 41), Latino Americans (men, N = 21; women, N = 21), and African Americans (men, N = 22; women, N = 22).*

^p = .07
Table 5.1

*Correlations between perceived body size, partner rating, interviewer rating, and BMI, separately by gender*

<table>
<thead>
<tr>
<th>Measures</th>
<th>Perceived body size</th>
<th>Partner rating</th>
<th>Interviewer rating</th>
<th>BMI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived body size</td>
<td>--</td>
<td>.72***</td>
<td>.80***</td>
<td>.78***</td>
</tr>
<tr>
<td>Partner rating</td>
<td>.64***</td>
<td>--</td>
<td>.73***</td>
<td>.75***</td>
</tr>
<tr>
<td>Interviewer rating</td>
<td>.76***</td>
<td>.80***</td>
<td>--</td>
<td>.83***</td>
</tr>
<tr>
<td>BMI</td>
<td>.72***</td>
<td>.73***</td>
<td>.81***</td>
<td>--</td>
</tr>
</tbody>
</table>

*Note.* Correlations for men are presented above the diagonal, and for women, below. Due to missing data, sample size was $N = 83 – 85$ for men, and $N = 83 – 85$ for women.

***$p < .001$***
Table 6.1

**Correlations between absolute value of discrepancy scores, and body image and self-esteem, separately by gender**

<table>
<thead>
<tr>
<th>Measures</th>
<th>Appearance orientation</th>
<th>Appearance evaluation</th>
<th>Body areas satisfaction</th>
<th>Self-esteem</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Men</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(same-sex peer ideal – perceived body size)</td>
<td>-.24*</td>
<td>-.46***</td>
<td>-.32**</td>
<td>-.04</td>
</tr>
<tr>
<td>(opposite-sex peer ideal – perceived body size)</td>
<td>-.30**</td>
<td>-.56***</td>
<td>-.39***</td>
<td>-.11</td>
</tr>
<tr>
<td>(partner rating – perceived body size)</td>
<td>.01</td>
<td>.25*</td>
<td>.16</td>
<td>.23*</td>
</tr>
<tr>
<td>(interviewer rating – perceived body size)</td>
<td>.05</td>
<td>-.06</td>
<td>.06</td>
<td>.02</td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(same-sex peer ideal – perceived body size)</td>
<td>.02</td>
<td>-.31**</td>
<td>-.27*</td>
<td>-.19</td>
</tr>
<tr>
<td>(opposite-sex peer ideal – perceived body size)</td>
<td>.05</td>
<td>-.44***</td>
<td>-.50***</td>
<td>-.35**</td>
</tr>
<tr>
<td>(partner rating – perceived body size)</td>
<td>-.11</td>
<td>.04</td>
<td>-.01</td>
<td>.03</td>
</tr>
<tr>
<td>(interviewer rating – perceived body size)</td>
<td>-.06</td>
<td>.02</td>
<td>.06</td>
<td>-.06</td>
</tr>
</tbody>
</table>

*Note. Due to missing data, sample size was \(N = 80 – 81\) for women, and \(N = 81 – 82\) for men.*

\(*p < .05; **p < .01, ***p < .001\)
Table 7.1

*Standardized betas in regression model predicting Time 3 body image and self-esteem from absolute value discrepancy scores*

<table>
<thead>
<tr>
<th></th>
<th>Appearance orientation</th>
<th>Appearance evaluation</th>
<th>Body areas satisfaction</th>
<th>Self-esteem</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>.33***</td>
<td>-.07</td>
<td>-.10</td>
<td>-.02</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>.09</td>
<td>.11</td>
<td>.12</td>
<td>-.08</td>
</tr>
<tr>
<td>BMI</td>
<td>-.00</td>
<td>-.27**</td>
<td>-.27**</td>
<td>-.08</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>.41***</td>
<td>.14</td>
<td>.07</td>
<td>.06</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>.08</td>
<td>.04</td>
<td>.06</td>
<td>-.14</td>
</tr>
<tr>
<td>BMI</td>
<td>.07</td>
<td>.01</td>
<td>-.08</td>
<td>.06</td>
</tr>
<tr>
<td><em>same-sex peer ideal – perceived body size</em></td>
<td>-0.08</td>
<td>-0.04</td>
<td>0.11</td>
<td>0.12</td>
</tr>
<tr>
<td><em>opposite-sex peer ideal – perceived body size</em></td>
<td>-0.08</td>
<td>-0.48***</td>
<td>-0.51***</td>
<td>-0.37**</td>
</tr>
<tr>
<td><em>partner rating – perceived body size</em></td>
<td>-0.07</td>
<td>0.06</td>
<td>-0.04</td>
<td>0.12</td>
</tr>
<tr>
<td><em>interviewer rating – perceived body size</em></td>
<td>0.03</td>
<td>-0.05</td>
<td>0.07</td>
<td>-0.06</td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>.20</td>
<td>.08</td>
<td>.11</td>
<td>.38*</td>
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<td>.02</td>
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<td><em>same-sex peer ideal – perceived body size</em></td>
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<td>-0.06</td>
<td>-0.02</td>
<td>0.18</td>
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Table 7.1 (continued).

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<th>Appearance orientation</th>
<th>Appearance evaluation</th>
<th>Body areas satisfaction</th>
<th>Self-esteem</th>
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<td>-.65**</td>
<td>-.45*</td>
<td>-.26</td>
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<tr>
<td><strong>(partner rating – perceived body size)</strong></td>
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<td>.06</td>
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<td><strong>(interviewer rating – perceived body size)</strong></td>
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<td>.09</td>
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<td>.05</td>
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<td>.25</td>
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<tr>
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<td>-.33^</td>
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<tr>
<td><strong>(interviewer rating – perceived body size) X gender</strong></td>
<td>-.11</td>
<td>.06</td>
<td>-.03</td>
<td>-.02</td>
</tr>
</tbody>
</table>

| Step 1 R²                | .12***                  | .07**                  | .08**                   | .02         |
| Step 2 R²                | .14**                   | .25***                 | .21***                  | .09*        |
| Step 3 R²                | .18**                   | .27***                 | .22***                  | .12*        |

| ΔR² (1 – 2)              | .02                     | .17***                 | .14***                  | .08*        |
| ΔR² (2 – 3)              | .05^                    | .03                    | .01                     | .03         |

*Note. N = 158; ^p < .09; *p < .05; **p < .01; ***p < .001*
Figure 1.1a. Contour Drawing Rating Scale- Female version (Thompson & Gray, 1995)

Figure 1.1b. Contour Drawing Rating Scale- Male version (Thompson & Gray, 1995)
Figure 2.1. Body dissatisfaction scores, separately by weight status and gender.
Emerging adults’ perceptions of messages about physical appearance

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Abstract

Emerging adults likely perceive powerful messages about physical appearance, but few studies have examined the actual content of these messages. College students (N = 154) who identified as African American, Latino American, and European American were asked 4 open-ended questions about the messages they perceived about physical appearance from family, peers, school, and media. Responses were coded for content and affect. The most common messages they perceived focused on the importance or non-importance of appearance, positive comments about participants’ appearance, and the link between attractiveness and success. The perception of these messages frequently differed by gender and source, but rarely by ethnicity. Women perceived more frequent and more negative messages than did men. Also, the family was perceived to convey more health-focused messages, whereas the media was perceived to transmit more superficial messages about appearance. Findings suggest that measures be developed to reflect some themes that have not been captured by existing instruments.
Emerging adults’ perceptions of messages about physical appearance

Whether they are watching reality television, attending fraternity parties or sitting at their parents’ dinner table over winter break, emerging adults receive powerful messages about physical appearance. These messages—whether indirect or overt—undoubtedly play a critical role in shaping their body image. Research to date has focused on the processes by which these messages are conveyed, and in understanding whether this communication is associated with body image. Although valuable in its own right, this work provides little insight into a more basic yet important question: what are the actual messages emerging adults perceive? To gain a better understanding of the content of these messages, we asked college students to describe the messages they received about physical appearance from family, peers, school, and media.

Messages about physical appearance

Messages about physical appearance can be conveyed in at least two ways: modeling of behaviors and attitudes related to physical appearance, and direct comments to individuals about their own physical appearance or body-related attitudes and behaviors (Benedikt, Wertheim, & Love, 1998; Fulkerson, McGuire, Neumark-Sztainer, French, & Perry, 2002; J. K. Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). Individuals who are exposed to harmful messages about appearance through these methods are expected to be less satisfied with their bodies (J. K. Thompson et al., 1999). For instance, it is possible that having a coach who encourages one to lose weight might lead to being unhappy with one’s looks.

Much of this work is based on close-ended, standardized measures that tend to reveal little about the content of messages perceived. Open-ended questions are particularly useful for understanding these messages because they allow participants to report a range of perceptions that might not otherwise be captured when their choices are limited. New areas of study can
benefit especially from this method. For example, variations of this method (e.g., interviews) have been used to examine body image experiences in older women, a group that has received little attention (e.g., Clarke, 2002). Both open-ended methods (Ogle & Damhorst, 2003; Wertheim, Paxton, Schutz, & Muir, 1997) and close-ended questionnaires have been used to examine sociocultural influences on individuals’ body image (Dunkley, Wertheim, & Paxton, 2001; McCabe & Ricciardelli, 2003; Stice, 1998), but the use of open-ended designs in particular have been mostly limited to female adolescents. Here, we combine the advantages of using open-ended methods, examining perceived messages from multiple socializing agents, and including both women and men in a single study.

Another unique feature of the present study is our focus on emerging adults. Emerging adulthood is the period of development from ages 18 to 25, and involves exploration in multiple domains, including identity (Arnett, 2000). Exploration may sometimes yield positive outcomes, but may also produce negative outcomes, such as risky behaviors (Arnett). With respect to body image, studies show high rates of body-related problems, such as body dissatisfaction and unhealthy dieting behaviors, among female emerging adults (Klemchuk, Hutchinson, & Frank, 1990). For emerging adults who are in college, characteristics of the university campus itself may heighten body image concerns. For example, residing in dormitories with potential dating partners, and becoming involved in campus groups that promote the importance of appearance may increase concern. Because of the increased risk for body-related problems in this population, it is important to understand the nature of the messages students perceive. In the present study, we asked both male and female emerging adult college students to describe the messages they perceived about physical appearance from: family, peers, school, and media.

Family
The family serves as an important context for learning about physical appearance beginning at birth. Within the family, individuals develop eating habits and values, learn cultural norms for physical appearance, and receive feedback about their looks (Birch, 1990; Ogle & Damhorst, 2003; Schwartz, Phares, Tantleff-Dunn & Thompson, 1999).

Existing studies show that parental communication regarding appearance is fairly common. For example, over one third of mothers with adolescent children report encouraging them to diet (Fulkerson et al., 2002), and over 90% of college students report receiving some sort of feedback from parents about their physical appearance (Schwartz et al., 1999). Girls and women, as well as individuals with higher BMIs, are more likely to perceive feedback about their appearance compared to boys and men and those who are smaller in size, respectively (McCabe & Ricciardelli, 2001; Schwartz et al., 1999).

Support for the association between parental modeling and children’s body image is mixed, with some studies demonstrating the importance of maternal modeling for adolescent daughters’ disordered eating (Pike & Rodin, 1991), and others failing to find such a link (Byely, Archibald, Graber, & Brooks-Gunn, 2000; Fulkerson et al., 2002). There is perhaps more evidence to support the role of negative or harmful direct comments from parents in adolescents’ and emerging adults’ body image (Fulkerson et al.; Schwartz et al., 1999). Taken as a whole, this literature suggests that messages about appearance from the family are fairly common and are more likely to be perceived by girls or women as well as those who are larger in size. Many of these studies focus on the methods by which parents communicate messages about body image, but it is also important to study the actual content of these perceived messages because of the significant implications they may have for body image.

*Peers*
Another context that has received considerable attention in the literature is peers. Research shows that female adolescents report receiving more feedback from both same- and opposite-sex peers about their bodies as well as more encouragement to lose weight from these individuals than do male adolescents (McCabe & Ricciardelli, 2001). A number of girls also report engaging in “fat talk” with their female peers, a style of conversation involving one girl claiming she is fat, and others reassuring her that she actually is not (Nichter & Vuckovic, 1994; Wertheim et al., 1997). Studies indicate that female friends’ negative or unhealthy attitudes and behaviors are associated with young girls’ and women’s own body image concerns and eating behaviors (Crandall, 1988; Paxton, Schutz, Wertheim, & Muir, 1999).

Studies show that male peers have an indirect influence on girls’ and women’s body image as well. For example, a number of female adolescents report that thinness is important for looking good to boys (Wertheim et al., 1997). Also, women tend to see their own bodies as larger than the size men would find most attractive (Fallon & Rozin, 1985). This perception may be due to both female adolescents’ feelings (Wertheim et al.), and men’s actual reports that men would be concerned about dating women who are larger than ideal (Powell & Kahn, 1995).

Although there is little existing research, studies that have included men’s perceptions show mixed findings. Some work shows that men see their own bodies as similar to the ideal they think women have for them (Fallon & Rozin, 1985; Forbes et al., 2001). However, other work shows that opposite-sex peers have a fairly strong influence on both men’s and women’s body image, even beyond that of same-sex peers and parents (Stanford & McCabe, 2002). For example, Sheets and Ajmere (2005) examined college students in exclusive relationships and found that 30% had told their partner or been told by a partner to lose or gain weight. For women, being told to lose weight, and for men, being told to gain weight, was associated with
lower relationship satisfaction. In sum, the literature suggests that a “thin ideal” peer culture exists among girls and women, and that these perceived norms are associated with individuals’ own unhealthy attitudes and behaviors. Less is known about boys and men, but some evidence suggests that female romantic partners may be an important source of influence.

School

Although the school context has received less attention as a source of information about physical appearance, research suggests that it is an important setting to examine. Some argue that schools, as institutions that promote standards of perfection and performance, add to the pressure that already exists in the wider culture regarding the body, and therefore, may help give rise to eating disorders and poor health (Evans, Rich, & Holroyd, 2004). Whether for reasons related to the school environment or not, teachers are indeed aware of the potential for body image and eating problems among their students, and have an interest in incorporating preventive material into their lesson plans (Piran, 2004). Some schools have already taken these steps by incorporating school-level prevention programs addressing body image disturbance (e.g., LeCroy, 2004). In spite of these steps, it remains largely unclear the particular messages students perceive from their school regarding appearance.

One issue to consider is teasing. When asked to recall whether they had been teased in school, 64% of adults reported being called names, most commonly names that related to their physical appearance (Crozier & Skliopidou, 2002). Other work has linked the experience of peer teasing about weight, to unhealthy weight control behaviors, binge eating, and body esteem (Lieberman, Gauvin, Bukowski, & White, 2001; Neumark-Sztainer et al., 2002). If schools fail to address this problem, students may perceive the message that teasing about physical appearance is acceptable.
In addition to teasing, membership in school sports teams may also be relevant to consider because of its potential link to body image. In a meta-analysis, Smolak, Murnen, and Ruble (2000) found that female athletes were at higher risk for eating problems than their nonathlete peers. They note, however, that the associations showed considerable heterogeneity, suggesting that it may not be sports participation itself but a variety of personal and environmental factors related to participation that produce these risks. A number of coaches report that they have observed eating problems among female athletes, behaviors that may have been unintentionally encouraged by coaches themselves (Heffner, Ogles, Gold, Marsden, & Johnson, 2003). Work with male athletes shows that body builders and runners may be at increased risk for body dissatisfaction and eating disturbances compared to non-athletes and men involved in other sports (Parks & Read, 1997; Pasman & Thompson, 1988). In sum, evidence suggests that experiences within schools, such as teasing and sports team membership, may play a role in communicating messages about appearance, but the actual messages students perceive about appearance are unknown.

Media

The socialization agent that has perhaps received the most attention as a transmitter of messages about physical appearance is the media. Evidence suggests that through broadcasting unrealistic images of beauty, the media imparts harmful messages about physical appearance. Specifically, the media portrays a thin ideal that is unrealistic for most women to achieve, yet many individuals think that models are realistic representations of actual people (Lakoff & Scherr, 1984). Thus, many female adolescents report that images of thin women cause them to strive for the thin ideal (Field et al., 1999; Tiggemann, Gardiner, & Slater, 2000). In recent years, the media has also portrayed a lean, muscular ideal for boys and men (Olivardia, 2002), although
the extent to which it is perceived as attainable is not yet known. Although these data suggest the increasing emphasis placed on young men’s appearance by the media, currently, their female peers report being more influenced to change their appearance by the media (McCabe & Ricciardelli, 2001).

Increased exposure to the media can be harmful for body image. For example, more time spent watching soap operas, movies, and music videos, and viewing idealized female magazine images is associated with poorer body image in female adolescents (Durkin & Paxton, 2002; Tiggemann & Pickering, 1996). Some factors that may increase vulnerability to these outcomes include higher BMI, social comparison tendency, internalization of the thin ideal, and body dissatisfaction (Durkin & Paxton, 2002; Stice, Schupak-Neuberg, Shaw, & Stein, 1994). For men, some work shows that viewing television advertisements with ideal male images is associated with poorer body image (Agliata & Tantleff-Dunn, 2004), yet other work shows both positive and negative associations between men’s media use and body image (Schooler & Ward, 2006). In sum, research shows that the media sends messages that promote the importance of embodying standards of beauty that are often unrealistic for many to achieve. Exposure to certain forms of media that portray these ideals is associated with poor body image, particularly for girls and women.

Gender and Ethnic Differences in the Perception of Messages about Physical Appearance

Much of the literature just reviewed is focused on European American girls and women, leaving little knowledge of messages perceived by men and individuals who identify as ethnic minorities. Some research shows that men and women are equally dissatisfied with their bodies (Cohn & Adler, 1992; Tantleff-Dunn & Thompson, 1995), yet other work shows that women are unhappier with their appearance and bodies than men (Gillen & Lefkowitz, 2006; Muth & Cash,
Findings on orientation toward appearance are more consistent, in that women report being more concerned with and invested in their looks than do men (Gillen & Lefkowitz; Muth & Cash). Although few studies have directly compared men’s and women’s perceived messages about appearance, the fact that women are more oriented toward, and possibly more dissatisfied with, their looks suggests that women may perceive a greater number of as well as more negative messages about appearance, than men.

In addition to gender, it is important to investigate how messages about physical appearance may differ by ethnic group, a question that has been rarely examined. Studies show that African Americans have more positive attitudes about their appearance than do European Americans and Latino Americans (Gillen & Lefkowitz, 2006; Miller et al., 2000). These differences may be attributed to more flexible criteria for acceptable body sizes in African Americans (Powell & Kahn, 1995; Rucker & Cash, 1992). Because of these appearance-related norms, African Americans may perceive fewer, and when perceived, more positive, messages about appearance from their families, peers, and media as compared to European Americans and Latino Americans. Some previous findings support this idea, but are limited in that they only compare African Americans to European Americans, and do not include Latino Americans. For example, one study found that African American adolescent girls perceived less weight and dieting concern from family and friends than did their European American counterparts (S. H. Thompson, Corwin, Rogan, & Sargent, 1999), and another found that African American girls perceived less competition and jealousy regarding appearance among friends than European American girls (Parker et al., 1995). In terms of media, one study found that European American women who viewed more mainstream television had poorer body image, whereas African American women who viewed more African American-oriented television had more positive
body image. Associations between African American-oriented television and body image, and mainstream television and body image, were nonsignificant for European Americans and African Americans, respectively (Schooler, Ward, Merriwether, & Caruthers, 2004). School, on the other hand, is a context likely to be shared among members of different ethnic groups, suggesting that the content of messages perceived from this source may differ little across groups.

Summary and Research Questions

Existing research shows that individuals quite often perceive messages about physical appearance from family, peers, and the media. Studies also show that schools may be an important context for the transmission of messages about appearance, although there is less direct evidence for this context. Taken as a whole, the literature on these contexts is mostly based on girls and women, adolescents, and European Americans, and therefore less is known about these contexts in the lives of multiethnic male and female emerging adults. The literature is also limited in its focus on how messages are communicated, but reveals little about the actual content of these messages. In the present study, our goal is to answer the following questions:

1. What messages do emerging adults perceive from family, peers, school, and media about physical appearance? Are there differences by source, gender, and ethnicity in the perception of these messages?

2. To what extent are messages about physical appearance positive and negative? Are there differences by source, gender, and ethnicity in the positivity and negativity of messages?

Method

Participants and Procedure

Data in the current study were drawn from the third time point of a longitudinal study of emerging adult college students. Time 1 took place during students’ first semester at college
(Fall 2002), Time 2 during their second semester (Spring 2003), and Time 3 during their third semester (Fall 2003). At Time 1 we contacted students that met our age criteria (ages 17 – 19), including all African American and Latino American students, and a randomly chosen 9% of European American students. Of these 839 students, 52% agreed to participate ($N = 434$). At each time point, there was a survey phase and a video phase. As part of the survey phase, students completed questionnaires in a classroom setting, and were paid $25 at Time 1, $30 at Time 2, and $35 at Time 3. Of these participants, a randomly selected sub-sample of African American, Latino American, and European American students who were at least 18 years old were invited to participate in the video phase ($N = 182$). Students were paid $25 upon completion of the video phase at each time point.

Open-ended data were drawn from the Time 3 video phase ($N = 154$). Participants in this phase ranged in age from 18.9 to 20.8 ($M = 19.6, SD = 0.4$), and 50% were women. In terms of ethnicity, 26% identified as African American, 25% as Latino American, and 49% as European American. Five percent of mothers and 5% of fathers had not graduated from high school, 30% of mothers and 27% of fathers had earned a high school diploma as their highest degree, 45% of mothers and 37% of fathers had earned an associates or bachelors as their highest degree, and 20% of mothers and 29% of fathers had earned a graduate degree as their highest degree. Seventy-one percent of participants reported that their parents were married to each other. As part of this video phase, students engaged in several tasks in front of a video camera with an opposite-sex partner. Data related to these videotaped tasks are not used in the current analyses.

Although the main variables of interest were drawn from the Time 3 video phase, data on participants’ background characteristics were taken from the Time 1 survey phase. The retention rate from Time 1 to Time 3 for the survey phase was 90%, and the video phase was 84%. Of the
students who completed surveys at Time 1 but did not return for Time 3 \((N = 44)\), 84\% were no longer eligible to participate. Specifically, these individuals were deceased \((N = 1)\), or were no longer enrolled in the university or were on leave \((N = 32)\). We did not attempt to contact individuals who left the university because the goal of the study was to examine students in the college environment. The remaining students refused to participate \((N = 4)\), or were unreachable \((N = 7)\).

To examine any potential biases due to attrition, several analyses were performed. First, participants who completed surveys at Time 3 were compared on demographic characteristics to those who did not participate at Time 3. Three chi-square tests and 3 t-tests were performed, and 3 were significant. Although these groups did not differ in age, they did differ on some demographic characteristics. Those who did not complete surveys at Time 3 were more likely to be African American or Latino American \((\chi^2 (2, 434) = 7.3, p < .05)\), to report that their fathers were not married to their mothers \((\chi^2 (4, 426) = 12.7, p < .05)\), and to report that their mothers had attained lower levels of education \((t = 2.4, p < .05)\). Second, participants who completed only the survey phase at Time 3 were compared on these same measures to those who completed both the survey and the video phase at Time 3. Three chi-square tests and 3 t-tests were performed, and 2 were significant. There were significant differences in two demographic characteristics, mother’s marital status \((\chi^2 (4, 387) = 11.4, p < .05)\), and ethnicity \((\chi^2 (2, 390) = 8.0, p < .05)\). Individuals who only participated in the survey phase were more likely to report that their mothers were not married to their fathers, and were more likely to identify as African American or Latino American.

**Measures**

Perception of messages about physical appearance. Participants were asked to write in
their own words messages they perceived from multiple sources about physical appearance. They were first presented with a set of instructions: “People have different ideas about physical appearance. These views may include thoughts about what is attractive, how people should look, and the importance of physical appearance. We are interested in learning how people develop these views”. Following these instructions were four open-ended questions: “What messages have you received from [your family/ from your peers/ in school/ from the media] about physical appearance?” Questions were not time-limited because we were more interested in understanding the most salient and meaningful messages, rather than those perceived during a specific period.

Coding of responses. The coding scheme was created by examining all participants’ responses to the open-ended questions (see Table 1.2). The same coding scheme was used to code all questions to allow for comparison across source. This coding scheme was composed of two parts. For the first part, responses were coded for the presence or absence of 9 major themes reflecting more general messages about physical appearance from each source. The option “uncodeable” was also included for cases where responses were illegible or did not address the question. Responses were also coded for the presence or absence of 19 subthemes within the major themes to reflect more specific messages perceived from these sources. Because subthemes represented more specific messages, when selected, the corresponding major theme had to be chosen as well. However, major themes could be selected without choosing a subtheme. Themes were not mutually exclusive in that multiple themes and subthemes could be selected for each response coded. Coders’ reliability was assessed by performing 6 pairwise kappas on the major themes/ subthemes, one for each possible coding pair (see Table 1.2).

The second part of the coding scheme was created to obtain ratings on the positivity and negativity of the messages. Positivity and negativity were rated separately because messages can
be both positive and negative at the same time. Message positivity (“to what extent are these messages positive?”) and negativity (“to what extent are these messages negative?”) were rated on a scale ranging from 1 = not at all, to 5 = a lot. Reliability was assessed by intraclass correlations (ICCs). ICCs for both positivity (.95) and negativity (.95) were satisfactory.

Typed versions of responses to all questions were coded independently by 4 undergraduate students at the same university. Meetings were held twice per week (for an average of 1 hour) over the course of a 15-week semester under the direction of the first author. The purpose of these meetings was to resolve any disagreements in coding, and thus, to create a master list of codes to be used for analysis in the present study. Thus, all final codes are based on the consensus of all 4 coders.

Results

Preliminary Analyses

We calculated the proportion of participants who mentioned each major theme/subtheme in their response (see Table 1.2). In cases where the average proportion across all four sources was 5% or less, the category was dropped from further analyses because it is difficult to draw firm conclusions based on the experiences of a small proportion of participants. Another criterion for excluding major themes/subthemes from further analyses was low reliability. In cases where the average kappa (κ) across coders for a particular category was .50 or less, it was not included in subsequent analyses. These criteria resulted in a total of 5 major themes and 6 subthemes for further analyses, as well as message positivity and message negativity.

The next step was to determine the associations between ratings of positivity and negativity within each of the four sources. Correlations ranged from .31 to .74, with only one above .50. Because the strength of these associations was in the moderate range, we considered
positivity and negativity to be distinct constructs.

**Messages about Physical Appearance from Family, Peers, School, and Media**

To address our first question regarding messages about appearance from the four socialization sources, we present in Table 1.2 the proportion of major themes/subthemes coded as present in participants’ responses. Here, we describe the 5 major themes and 5 subthemes mentioned most frequently. To illustrate their meaning, we provide examples of responses that were coded in each of them. Italicized words represent spelling errors that retain the participants’ exact wording. We were also interested in testing source (i.e., family, peers, school, and media), gender, and ethnic differences in these major themes/subthemes. To address this goal, we performed a series of mixed model ANOVAs, with source as a within-person effect, and gender and ethnicity as between-person effects. Thus, our description of the most common themes/subthemes is followed by any significant source, gender, and ethnic differences. Simple contrast tests were used to follow up on any significant within-person effects (i.e., a main effect for source, or any interaction involving source).

**None.** Some participants wrote that they perceived no messages about physical appearance (see Table 1.2). In order to be coded as “none”, participants had to explicitly write that they had not received any messages. ANOVA results showed main effects for gender, with men more likely than women to report that they had perceived no messages about appearance (see Table 2.2). There was also a main effect for source. Simple contrasts with school as the reference category showed that individuals were more likely to perceive no messages about appearance in school as compared to family, peers, and media ($ps < .001$).

**Appearance is important.** Appearance is important emerged quite frequently in participants’ responses (see Table 1.2). Because this major theme had a number of frequently
appearing subthemes, we focus our description on these more specific messages.

One message that was evident in a number of responses was that participants should meet cultural ideals of beauty. Some participants wrote that they perceived the message that they should resemble the male ideal, an ideal often described as a lean and muscular body (see Table 1.2). Although this body type is generally considered to be the ideal for men (Olivardia, 2002), both men’s and women’s responses were coded for this subtheme because it is possible that women might perceive the message that they should be lean and muscular as well. As an example of this message, one man wrote: “The media shows that in everything people need to be skinny, muscular, and beautiful”. There were significant differences by source in the perception of this message (see Table 2.2). Simple contrast tests with media as the reference category showed that individuals were more likely to perceive this message from the media than from school or family ($p = .001$).

The message that individuals should embody the female ideal of beauty also emerged in a number of responses (see Table 1.2). Of those who described this message, many noted that thinness was a central feature of this ideal. Here, both men’s and women’s responses were coded for this subtheme because men can also perceive the message that they should be thin. As an example of this message, a woman wrote: “That being thin, beautiful and always looking your best is the most important thing. Models, actresses are always super thin without an once of fat on their bodies and they send the message that to be famous, beautiful, and drooled over you have to look like them”. The perception of this message differed significantly by source and gender, with main effects for both factors, as well as an interaction between them (see Table 2.2). To follow up on this interaction, t-tests were performed separately by source in order to compare men’s perceptions to women’s. Women were more likely to perceive this message from their
peers than were men ($p < .01$), and women were more likely to perceive this message from the media ($p < .001$) than were men. There were no significant gender differences for family and school.

In addition to messages about meeting cultural ideals of beauty was the message that participants should exercise (see Table 1.2). For instance, a female participant perceived this message through observing women in her sorority: “Being in a sorority it seems that all the girls care about are looking good, but whenever we go out to eat, they only eat salad and then go to the gym to ‘work it off’ (there is nothing in salad to ‘work off’)”. There were no significant differences for source, gender, or ethnicity (see Table 2.2).

Also reflecting the idea that appearance is important was the message that participants’ appearance should be presentable, respectable, and clean (see Table 1.2). As an example, one participant described this message from his family: “I should always look good in public, and be cleanly and well dressed. My parents like people like these and always say they are good people”. There was a significant main effect for source in the perception of this subtheme, as well as a significant interaction between source and ethnicity (see Table 2.2). To follow up on this interaction, ANOVAs were performed separately by source in order to compare the perceptions of individuals from different ethnic groups. Results were significant for family ($p < .05$), but not for other sources ($ps > .05$). Follow-up Tukey tests to this significant effect indicated that Latino Americans were more likely to perceive this message from family than were African Americans ($p < .05$).

*Appearance is not important.* In addition to perceiving messages that emphasized the importance of appearance, participants also described messages that appearance was not important (see Table 1.2). There were two fairly frequent sub-themes – the first, messages that
internal qualities (e.g., “what’s inside”) are more important than external appearance. As an example, one woman wrote perceiving the following message from her family: “Although beauty may get you noticed, it is the brains behind it that will make all the difference”. There were significant main effects for gender and source in the perception of this message, as well as interactions between source and gender, and gender and ethnicity (see Table 2.2). To follow up on the gender x source interaction, t-tests were performed separately by source to compare men’s and women’s perceptions. Results were significant for family ($p < .001$), indicating that women were more likely to perceive this message from their family than were men; however, there were no significant gender differences for the other sources. The interaction between gender and ethnicity was followed up by performing t-tests separately by ethnic group. The purpose of these tests was to compare men’s and women’s means (within ethnic group) on the perception of this message. Among European Americans, women were more likely to perceive this message than were men ($p < .001$), but there were no significant differences among African Americans and Latino Americans ($ps > .05$).

The second subtheme was that individuals’ appearance is unique and that all should be respected regardless of their shape or size. For instance, one man wrote: “Basically you have to love + be comfortable with yourself, so whatever shape that may be, so love it”. The perception of this message differed significantly by source (see Table 2.2). Simple contrasts with family as the reference category showed that individuals were more likely to perceive this message from their family than from peers or media ($ps < .05$).

Positive comments about appearance. Some participants mentioned specific positive comments they had received about their appearance, such as remarks about their shape, weight, clothing, or attractiveness (see Table 1.2). As an example of this message, a woman wrote: “My
friends always tell me they love my style, because *its* me, and *its* original. I mean one day I'll
dress all girly + they compliment me, + the next day I'll dress like a skater or ghetto and they still
compliment me”. The perception of this message differed significantly by source (see Table 2.2).
Simple contrast tests with family as the reference category showed that individuals were more
likely to perceive positive remarks from family than in school or from media (*ps* < .001).

*Attractiveness leads to success.* Another message participants described was that
individuals who are more attractive are more likely to experience certain advantages and
successes in life as compared to those who are less attractive (see Table 1.2). As an example of
this idea, one man wrote:

> The media, eh? If you don't look good you won't have any friends. You need to be
> attractive to be popular in your social life and financially successful. Ugly people should
> not be on TV. If you are not a 10 then you need to buy beauty products to better your
> life. Being liked is most important, and nobody likes someone if they're ugly. That's
> what the media tells us. Try not to listen.

There were main effects for gender in the perception of this message, in that women were more
likely to perceive this message than were men (see Table 2.2). There was also a main effect for
source. Simple contrasts with media as the reference category showed that individuals were more
likely to perceive the message that attractiveness is linked to success from the media than from
peers or family (*ps* < .01).

*Positivity and Negativity of Messages about Physical Appearance*

In addition to understanding the content of messages about appearance, we were also
interested in examining the degree to which these messages were positive and negative (see
Table 3.2). Ratings on the extent to which messages from the four socialization sources were
positive tended to be fairly low, with a range of 1.1 (1 = not at all) to 2.9 (3 = somewhat). As an
example of a message that was rated high on positivity, one man wrote: “It doesn't really matter
how people look, it's what their heart is like or who they really are. This was conveyed by both my parents working w/ mentally impaired people and having friends that are disabled”. There were significant source differences as well as a significant interaction between source and ethnicity in the positivity of messages (see Table 3.2). To follow up on this interaction, ANOVAs were performed separately by source, in order to test ethnic differences within each source. There was a significant ethnic difference for positivity of messages from family ($p < .05$), but ethnic differences were not significant for other sources. Follow-up Tukey tests showed that European Americans perceived messages from their family to be more positive than did Latino Americans ($p < .05$).

In terms of the extent to which messages from the four socialization sources were negative, most mean ratings tended to be in the middle of the scale, with a range of 1.8 (1 = not at all; 2 = a little) to 4 (quite a bit). As an example of a message that was rated high on negativity, one woman wrote perceiving this message from the media: “Omigod! You should get teeth veneers, lasik eye surgery, boob jobs, brow lifts, permanent makeup and a personal trainer as soon as you can afford it!” There were main effects for gender and source in the negativity of messages (see Table 3.2). Messages perceived by women were more negative compared to messages perceived by men. Simple contrast tests with media as the reference category showed that messages from the media were more negative compared to messages from family, peers, and school ($ps < .001$).

Discussion

In the current study, we asked emerging adult college students to describe in their own words the messages they perceived about physical appearance from four significant socialization agents—family, peers, school, and media. The messages participants mentioned most frequently
related to the importance or non-importance of appearance, positive comments about their looks, and the link between attractiveness and success. Perception of many of these messages differed by source and gender, but rarely by ethnicity. We also examined the degree to which these messages were positive and negative, and found that messages were on average a little positive and somewhat negative.

Source Differences in the Perception of Messages

A small proportion of participants reported that they did not perceive any messages at all about physical appearance, but there were source differences in this perception. Individuals were most likely to perceive no messages about appearance in school. Because the primary function of schools is to encourage academic learning, messages about academic topics may be more salient in this context than messages about appearance. Nonetheless, over three-fourths of participants did in fact describe messages about appearance in school, suggesting that school is an important context for learning about physical appearance.

Another message that was perceived to differ by source was that individuals should be lean and muscular, a body type often considered to be ideal for men (Olivardia, 2002). This message was most likely to be perceived from the media. Recent research has shown a movement in the media toward the depiction of a lean and muscular ideal for men (e.g., Leit, Pope, & Gray, 2001), supporting our finding. However, it is important to note that there were no gender differences in the message that individuals should be lean and muscular, perhaps because of increased pressure on women to be fit and toned (Olivardia).

A similarly aesthetics-focused message that was more likely to be perceived by the media, as well as in school, was the idea that being more attractive is associated with greater success in life. Celebrities and models in the media are portrayed as glamorous, successful, and
icons of physical perfection—women as thin and beautiful, and men as muscular and handsome. Considering this portrayal, it is hardly surprising that individuals would perceive beauty and success as inextricably linked. In school, students may perceive a similar message, given that more attractive students tend to be more popular among peers (Boyatzis, Baloff, & Durieux, 1998), and perhaps among teachers as well, as suggested by Eckert’s (1989) work on peer crowds.

Some individuals perceived more healthful messages, often from family, and in some cases, from peers and school. Specifically, the message that individuals’ appearance is unique and should be valued regardless of shape or size was most commonly perceived from family and school. To our knowledge, no published work has examined the perception of this message, with past work focusing on more harmful ideas about weight and shape (e.g., Benedikt et al., 1998; Pike & Rodin, 1991). Results of the present study suggest, however, that messages from the family are not limited to the transmission of negative ideas. As far as school, it is possible that the increased presence of school-based intervention programs, particularly those that use a media literacy approach (e.g., Irving, DuPen, & Berel, 1998), may be sending students this message.

Another healthful message was the perception of positive remarks about participants’ appearance. Not surprisingly, these remarks were most likely to be perceived from family and peers—sources with whom individuals have interpersonal relationships. Previous studies have measured general feedback about appearance (McCabe & Ricciardelli, 2001; Schwartz et al., 1999) or negative comments, particularly teasing (e.g., Neumark-Sztainer et al., 2002; Schwartz et al.), yet relatively few have assessed positive remarks (for an exception, see Ricciardelli, McCabe, & Banfield, 2000). In the current study, however, we found that participants mentioned receiving positive comments more than negative comments, suggesting again that family, as well
as peers, may be perceived as more positive sources of socialization around physical appearance than previously assumed.

In addition to exploring the content of messages about appearance, we also examined the extent to which they were positive and negative. Across the four sources, messages about appearance were on average a little positive, although there were source differences. Messages from family were the most positive. As noted, the focus in the literature is mostly on parents’ communication of negative or harmful messages to their offspring (e.g., Benedikt et al., 1998; Pike & Rodin, 1991). Results of the present study suggest, however, that studies should also focus on the positive messages individuals perceive from their family.

Messages about appearance were on average somewhat negative, although there were source differences here as well. Messages from the media were perceived as most negative. The media is different from the other socialization sources because it is profit-driven, and therefore, less concerned with promoting positive development in its consumers (Arnett, 1995). Thus, instead of transmitting realistic, healthful messages, it communicates ideas or images that it believes will be inherently appealing to people, such as physically attractive models. Because cultural ideals of beauty are often inconsistent with individuals’ actual body shape, particularly for women (J. K. Thompson et al., 1999), it is reasonable that the media would be perceived quite negatively.

Gender Differences in the Perception of Messages

In addition to highlighting these source differences, it is also important to point out gender differences. Men were more likely to perceive no messages about appearance than were women, a finding similar to previous work on adolescents and college students (McCabe & Ricciardelli, 2001; Schwartz et al., 1999). This finding was not surprising because social norms
prescribe that women should be concerned with their appearance (Striegel-Moore et al., 1986), suggesting that women may be more sensitive to messages about this topic than men.

The message that participants should be thin, a feature often associated with the female ideal of beauty, was more likely to be perceived by women; however, this gender difference only existed for the media and peer contexts. In the US, there is significant sociocultural pressure on women to be thin, and some argue that the media in particular is a critical vehicle for transmitting this message (J. K. Thompson et al., 1999). Findings also support previous research that indicates that female adolescents perceive thinness to be important to both their same- and opposite-sex peers (Wertheim et al., 1997), and tend to see their own bodies as falling short of these thin ideals (Forbes et al., 2001). Men, on the other hand, tend to see their own bodies as smaller than the size they think other men would find most attractive, and comparable to the size women would find most attractive (Forbes et al.), supporting our finding that men were less likely to perceive messages emphasizing thinness from their peers than were women.

Also more likely to be perceived by women than by men was the idea that being more attractive is associated with success. For women, success in their social relationships, and in their heterosexual romantic relationships in particular, is contingent on their physical attractiveness and weight, whereas this same association is not nearly as strong for men (Feingold, 1990; Harris, Walters, & Waschull, 1991). In light of these facts, women do appear to be more likely to perceive this message.

Although women were more likely than men to perceive these superficial messages about appearance, they were also more likely to perceive the idea that what is inside is more important than physical appearance from their family. Studies suggest that women are at greater risk for body image disturbance than are men (Gillen & Lefkowitz, 2006; Muth & Cash, 1997). Family
members of women, as individuals who are concerned about promoting positive development in other family members, may be sensitive to this vulnerability, and thus, may make special efforts to emphasize the importance of internal rather than external characteristics.

Gender differences also emerged in the negativity of messages about appearance, in that women perceived more negative messages than men did. In the US, there is tremendous sociocultural pressure on women to achieve a thin body, even though this thin ideal is out of reach for the average American woman (J. K. Thompson et al., 1999). There is also evidence of an emerging ideal of leanness and muscularity for men (Olivardia, 2002), but the extent to which it is attainable for most men is not well-known. The narrower ideal of beauty for women suggests that the messages they perceive about appearance would be more negative than those perceived by men. It is important to point out, however, that there were no gender differences in message positivity, suggesting that women may perceive fairly mixed messages about appearance.

*Ethnic Differences in the Perception of Messages*

Ethnic differences in the perception of messages were not as common, although there were some differences. In particular, Latino Americans were more likely to perceive the message that their appearance should be presentable, respectable, and clean from their family as compared to African Americans. Previous research suggests that Latino Americans see their dress in the workplace as important for their advancement (Rucker, Anderson, & Kangas, 1999). It is possible that the value of an appropriate and respectable appearance may have been instilled by Latino Americans’ family members, who may see this strategy as a means to achieve success in society. African Americans, on the other hand, may have been less likely to perceive this message because it encourages meeting a certain standard of appearance. Prior research on
African American adolescent girls suggests that their family and communities encourage the development of a personal style as a means to project their own individuality as well as their larger culture (Parker et al., 1995). Because of these differences in cultural values, it is reasonable that Latino Americans would be more likely perceive a message that reflects achieving appearance-related standards.

Also differing by ethnicity was the message that what’s “inside” is more important than outer appearance. Among European Americans, women were more likely to perceive this message than were men, but there were no gender differences in other ethnic groups. European American women in particular may be at risk for body image problems because they subscribe to a narrow ideal of thinness and perceive pressure to attain this ideal (Parker et al., 1995; Wertheim et al., 1997). Individuals or institutions with whom European American women have close contact, including family, peers, and school (none of these women reported perceiving this message from the media) may recognize this potential vulnerability, and thus may emphasize internal qualities over outer beauty.

Finally, European Americans were more likely to perceive positive messages about appearance from their families than Latino Americans. Most of the literature on body image problems has focused on European Americans, perhaps because of the assumption that these issues are not present in ethnic minority populations (Altabe, 2001). Given this assumption, family members may not be as attuned to this potential vulnerability in Latino Americans. However, recent research shows that European Americans and Latino Americans have similar levels of body image disturbance (Gillen & Lefkowitz, 2006; Miller et al., 2000). Thus, family members of Latino American students may not put forth as much effort to convey positive messages as those of European American students, which may explain why European American
participants perceived more positive messages.

Implications and Conclusion

This study has several limitations. One limitation is that the open-ended questions did not ask individuals to distinguish messages from different individuals within a single source. For example, it is possible that emerging adults may perceive different messages about appearance from same-sex than from opposite-sex peers, and from parents than from siblings. Future studies may want to distinguish between these categories to determine if there are any differences in messages perceived. Another limitation is that we examined emerging adults’ perception of messages, ideas that may or may not reflect the actual messages sent by these sources. Also, the study was limited to individuals who attend college. Emerging adults who are not in college may differ from college students in their exposure to peers, family members, and teachers, and thus, may perceive very different messages about appearance. Further, the study took place at a largely European American university, within a community with a similar population. Ethnic minority students who attend this university may be different in some ways from those at schools with a greater number of ethnic minority peers. It is possible that these students in the current study may have been more likely to have grown up in predominantly European American communities, suggesting that their messages may be mostly from European Americans rather than ethnic minority individuals. This possibility may explain why there were relatively few ethnic differences found in the current study, as individuals from different ethnic groups may have similar perceptions. Had the study been conducted at a university with a more ethnically diverse student population, it is possible that more ethnic differences would have emerged. Thus, results may have limited application to these students at other universities.

The results of this study have implications for future research. First, findings suggest that
open-ended methods are a useful tool for examining messages perceived from socialization sources that researchers know little about (e.g., school). It is important to investigate these new contexts of socialization to understand the nature of messages individuals perceive from them. In particular, we suggest that more studies examine messages perceived in school, given that most emerging adults perceived some sort of message about appearance in this context.

Another important implication of using open-ended methods is that we were able to identify a number of messages emerging adults perceive that have not been captured by existing scales, particularly those that are more healthful. Thus, we suggest that valid and reliable instruments be constructed to reflect these constructs. In particular, scales could be developed to assess the message that individuals’ appearance should be presentable, respectable, and clean, that measure positive remarks or compliments about individuals’ appearance, and that assess messages that appearance is not important.

The current study contributes to the literature in a number of ways. Findings indicate that the most common messages emerging adults perceive about physical appearance reflect the extent to which appearance is important, positive remarks about their own appearance, and the link between attractiveness and success. Women perceived more messages than did men; these messages stressed the importance of thinness and the link between beauty and success, but also the idea that what’s “inside” is most important. Messages perceived from the media were mostly superficial and negative, and messages from family were more healthful than previously assumed. Thus, as the current study indicates, some emerging adults do indeed perceive the message that “we should all look like Britney”, but a significant number also have been told that it is really “what’s inside that counts”.

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References


Exposure to the mass media and weight concerns among girls. *Pediatrics, 103*, E36.


Table 1.2

Proportion of emerging adults describing messages about physical appearance from family, peers, school, and media

<table>
<thead>
<tr>
<th></th>
<th>Family</th>
<th>Peers</th>
<th>School</th>
<th>Media</th>
<th>Kappas Range (Mean)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uncodeable</td>
<td>.01</td>
<td>.01</td>
<td>.02</td>
<td>.03</td>
<td>.46 – .86 (.58)</td>
</tr>
<tr>
<td>None</td>
<td>.05</td>
<td>.03</td>
<td>.16</td>
<td>.03</td>
<td>.83 – .92 (.87)</td>
</tr>
<tr>
<td>Appearance is important</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Should meet male ideal</td>
<td>.01</td>
<td>.05</td>
<td>.01</td>
<td>.11</td>
<td>.72 – .83 (.79)</td>
</tr>
<tr>
<td>Should meet female ideal</td>
<td>.04</td>
<td>.09</td>
<td>.05</td>
<td>.37</td>
<td>.80 – .88 (.83)</td>
</tr>
<tr>
<td>Should exercise</td>
<td>.07</td>
<td>.10</td>
<td>.04</td>
<td>.04</td>
<td>.58 – .73 (.64)</td>
</tr>
<tr>
<td>Should look presentable/respectable/ clean</td>
<td>.27</td>
<td>.10</td>
<td>.13</td>
<td>.03</td>
<td>.78 – .83 (.80)</td>
</tr>
<tr>
<td>Should limit accessories</td>
<td>.04</td>
<td>.01</td>
<td>.01</td>
<td>.00</td>
<td>.66 – .80 (.73)</td>
</tr>
<tr>
<td>Should be comfortable with self/ have own style</td>
<td>.04</td>
<td>.05</td>
<td>.01</td>
<td>.00</td>
<td>.51 – .72 (.57)</td>
</tr>
<tr>
<td>Should wear fashion that is “in”</td>
<td>.01</td>
<td>.05</td>
<td>.03</td>
<td>.06</td>
<td>.68 – .82 (.75)</td>
</tr>
<tr>
<td>Should look good to impress opp. sex</td>
<td>.00</td>
<td>.02</td>
<td>.01</td>
<td>.00</td>
<td>.30 – .62 (.49)</td>
</tr>
<tr>
<td>Should eat healthfully</td>
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<td>.01</td>
<td>.01</td>
<td>.00</td>
<td>.60 – .71 (.67)</td>
</tr>
<tr>
<td>Should diet</td>
<td>.01</td>
<td>.03</td>
<td>.00</td>
<td>.01</td>
<td>.57 – .66 (.61)</td>
</tr>
<tr>
<td>Should avoid being fat</td>
<td>.05</td>
<td>.04</td>
<td>.00</td>
<td>.02</td>
<td>.46 – .69 (.56)</td>
</tr>
<tr>
<td>Appearance is not important</td>
<td>.43</td>
<td>.16</td>
<td>.26</td>
<td>.01</td>
<td>.81 – .87 (.84)</td>
</tr>
<tr>
<td>What’s inside is more important</td>
<td>.19</td>
<td>.03</td>
<td>.05</td>
<td>.00</td>
<td>.77 – .87 (.83)</td>
</tr>
<tr>
<td>Appearance is unique</td>
<td>.09</td>
<td>.03</td>
<td>.07</td>
<td>.00</td>
<td>.36 – .62 (.54)</td>
</tr>
<tr>
<td>Health more important than appearance</td>
<td>.04</td>
<td>.00</td>
<td>.03</td>
<td>.01</td>
<td>.33 – .55 (.44)</td>
</tr>
<tr>
<td>Positive comments about appearance</td>
<td>.14</td>
<td>.10</td>
<td>.02</td>
<td>.00</td>
<td>.80 – .90 (.84)</td>
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<tr>
<td>Negative comments about appearance</td>
<td>.02</td>
<td>.02</td>
<td>.00</td>
<td>.00</td>
<td>.60 – .83 (.75)</td>
</tr>
<tr>
<td>Attractiveness leads to success</td>
<td>.03</td>
<td>.07</td>
<td>.13</td>
<td>.21</td>
<td>.71 – .77 (.73)</td>
</tr>
<tr>
<td>Attractive people more accepted/ popular</td>
<td>.01</td>
<td>.05</td>
<td>.07</td>
<td>.06</td>
<td>.55 – .75 (.65)</td>
</tr>
<tr>
<td>Attractive people better able to achieve personal goals</td>
<td>.00</td>
<td>.01</td>
<td>.01</td>
<td>.05</td>
<td>.35 – .61 (.50)</td>
</tr>
<tr>
<td>Attractive people are happier</td>
<td>.00</td>
<td>.01</td>
<td>.00</td>
<td>.03</td>
<td>.33 – .66 (.55)</td>
</tr>
<tr>
<td>Unattractive people have more negative qualities</td>
<td>.01</td>
<td>.00</td>
<td>.01</td>
<td>.04</td>
<td>.29 – .66 (.48)</td>
</tr>
<tr>
<td>Should meet alternative ideal</td>
<td>.01</td>
<td>.01</td>
<td>.00</td>
<td>.02</td>
<td>.28 – .67 (.50)</td>
</tr>
<tr>
<td>Should meet alternative female ideal</td>
<td>.01</td>
<td>.01</td>
<td>.00</td>
<td>.01</td>
<td>.40 – .80 (.58)</td>
</tr>
<tr>
<td>Should meet alternative male ideal</td>
<td>.01</td>
<td>.00</td>
<td>.00</td>
<td>.01</td>
<td>--</td>
</tr>
<tr>
<td>Other</td>
<td>.17</td>
<td>.18</td>
<td>.13</td>
<td>.06</td>
<td>.31 – .53 (.42)</td>
</tr>
</tbody>
</table>

*Note.* -- indicates that kappa (κ) could not be calculated. Italicized values were dropped from further analyses.
Table 2.2

Mean differences in perceived messages about physical appearance from family, peers, school, and media

<table>
<thead>
<tr>
<th></th>
<th>Family</th>
<th>Peers</th>
<th>School</th>
<th>Media</th>
<th>$F$ (source)</th>
<th>$F$ (gender)</th>
<th>$F$ (ethnicity)</th>
<th>$F$ (source x gender)</th>
<th>$F$ (source x ethnicity)</th>
<th>$F$ (gender x ethnicity)</th>
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</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12.5***</td>
<td>11.5**</td>
<td>0.4</td>
<td>1.5</td>
<td>2.1</td>
<td>0.5</td>
</tr>
<tr>
<td>Women</td>
<td>.00</td>
<td>.02</td>
<td>.10</td>
<td>.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>.10</td>
<td>.05</td>
<td>.25</td>
<td>.07</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appearance is important</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>28.2***</td>
<td>6.6*</td>
<td>2.2</td>
<td>0.2</td>
<td>1.5</td>
<td>0.2</td>
</tr>
<tr>
<td>Women</td>
<td>.67</td>
<td>.82</td>
<td>.48</td>
<td>.93</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Men</td>
<td>.52</td>
<td>.73</td>
<td>.39</td>
<td>.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>Should meet male ideal</td>
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<td></td>
<td></td>
<td>7.1***</td>
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<td>0.6</td>
<td>2.2</td>
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<tr>
<td>Should meet female ideal</td>
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<td></td>
<td></td>
<td>41.7***</td>
<td>32.1***</td>
<td>1.8</td>
<td>11.7***</td>
<td>0.8</td>
<td>1.7</td>
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<tr>
<td>Women</td>
<td>.09</td>
<td>.18</td>
<td>.08</td>
<td>.59</td>
<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Should exercise</td>
<td>.06</td>
<td>.09</td>
<td>.05</td>
<td>.04</td>
<td>1.5</td>
<td>2.5</td>
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Table 2.2 (continued).

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<td>.00</td>
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<td>7.0***</td>
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<td>.15</td>
<td></td>
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</tbody>
</table>

*Note. Proportions are only shown for gender and/or ethnic groups when significant. Three way interactions between source, gender, and ethnicity were never significant, and therefore, are not reported.

*p < .05; **p < .01; ***p <.001
Table 3.2

Mean differences in the positivity and negativity of messages about physical appearance

<table>
<thead>
<tr>
<th></th>
<th>Family</th>
<th>Peers</th>
<th>School</th>
<th>Media</th>
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<th>F (ethnicity)</th>
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<td>69.1***</td>
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<td>.01</td>
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<td>2.1</td>
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</tbody>
</table>

*Note.* Responses range from 1 (not at all) to 5 (a lot). Proportions are only shown for gender and/or ethnic groups when significant. Interactions between source x gender, gender x ethnicity, and source x gender x ethnicity were never significant, and therefore, are not reported.

*p < .05; ***p < .001
A longitudinal analysis of body image development during the early college years

Meghan M. Gillen, Megan E. Patrick and Eva S. Lefkowitz

The Pennsylvania State University

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Abstract

In the present study we use longitudinal methods to examine body image development during the transition to college. Students \((N = 390)\) who identified as African American, Latino American, and European American completed surveys during their first, second, and third semesters at college. Women (but not men) evaluated their appearance in a more positive way over time, in spite of a slight increase in their body size. There were no ethnic differences in body image development, suggesting that sharing a similar ecological context during this transitional phase may promote more similar views of appearance among individuals from different ethnic groups. Findings extend prior cross-sectional work by demonstrating important links between gendered personality traits during the first semester of college and body image, and suggest that religiosity during this time may be important for body image as well. Gendered personality traits also predicted change in some aspects of body image, although associations were fairly small.
A longitudinal analysis of body image development during the early college years

Body image is dynamic in that it is susceptible to the many environmental changes that individuals encounter in their lifetime. For those who attend college, the transitional period to the university campus may be an important time to examine body image development. Students are living without direct adult supervision, often for the first time, thus leaving them to make crucial health- and social-related decisions on their own. Moreover, living in close quarters with their same- and opposite-sex peers may leave them feeling vulnerable to appearance-related scrutiny. These factors, in combination with the exploratory nature of this developmental period—emerging adulthood—make this a crucial period for body image development (Arnett, 2000). However, as with any human experience, there is likely to be variability between individuals in how they feel toward their bodies. There are some who may make poor decisions and who feel uncomfortable in the presence of their new peers, yet there are others who may move through this transitional phase with relative ease. The following paper takes a longitudinal approach to understanding the factors that contribute to body image and its development during this transitional phase. The first goal is to examine changes in college students’ body image over time, and whether changes vary by gender and ethnicity. As part of this goal, we also explore whether changes in body image parallel changes in body size. The second goal is to examine the extent to which various factors that are salient in college students’ lives contribute to body image, as well as changes in body image, over this developmental period.

Body image in college students

Body image has increasingly been recognized as an important issue in college student populations. The fairly closed-off, private nature of many college campuses may create an environment that heightens competition—both in terms of academics and appearance—among
its students (Striegel-Moore, Silberstein, & Rodin, 1986). Female college students in particular may be at increased risk for body image problems. Among these students there is a high prevalence of body image disturbance, such as body dissatisfaction and unhealthy weight management behaviors (Klemchuk, Hutchinson, & Frank, 1990; Mintz & Betz, 1988). Perhaps because of the widespread prevalence of body image problems, and the fact that these problems are an important predictor of eating disorders (Polivy & Herman, 2002), current studies have conceptualized body image disturbance as an important outcome in its own right (see Jones, 2004; Stice & Whitenton, 2002). Accordingly, much work has aimed to understand body image in non-clinical populations, particularly its predictors and correlates. The current study adds to past literature in several ways.

First, it takes a developmental approach to understanding body image. Traditional-aged college students face a number of developmental tasks in emerging adulthood. Arnett (2000) has described emerging adulthood as the period of development from ages 18 to 25 that is marked by exploration in a number of domains such as identity, relationships, and worldviews. For students who are in college, the campus environment may allow them special freedom from adult responsibilities (Maggs, 1997), heightening the potential for exploration in these domains. Inherent in the nature of exploration is the potential to develop unhealthy attitudes or behaviors with respect to the body. For example, joining campus groups that emphasize appearance or developing unhealthful eating habits that promote weight gain may contribute to body image problems. Previous work has examined body image in college students (e.g., Cohn & Adler, 1992), but has rarely framed body image in the context of these ecological changes, in spite of their potential for increasing risk.
Second, we examine body image among a multiethnic sample of male and female college students. Much of the literature focuses on European American women, most likely because they report a high prevalence of body image problems (Klemchuk et al., 1990; Mintz & Betz, 1988). Recent evidence suggests, however, that cultural pressure on men to be both lean and muscular may be increasing (Leit, Pope, & Gray, 2001). There is also little work on body image in different ethnic groups. The most common comparison made is between African American and European American women (e.g., Harris, 1994; Rucker & Cash, 1992), leaving little knowledge of body image in African American men, or in other ethnic groups such as Latino Americans. However, some research suggests that Latino Americans’ level of body image disturbance looks similar to that of European Americans (Gillen & Lefkowitz, 2006; Miller et al., 2000). Although useful for understanding mean differences in body image, this work reveals little about how body image might change during the transition to college for members of different ethnic groups. Students of all ethnicities experience similar ecological changes during this transition (e.g., living in dormitories, Maggs, 1997), suggesting that their body image may grow more similar to that of their peers. For example, research shows that African Americans have a more positive body image than their European American counterparts (Miller et al.), but little is known about how these attitudes might change (or not change) for African American students leaving their parents’ community to enter a predominantly European American university. It is possible that as African American students spend more time in an environment with mostly European American peers, their attitudes may grow to resemble those of these students.

Finally, we use longitudinal methods to understand body image development during the early college years. This strategy builds on previous work which is mostly focused on change over time during adolescence. Some longitudinal work during adolescence points to increases
over time in body dissatisfaction among European American girls, and an increase—though not as steep—among African American girls as well (Striegel-Moore et al., 2000). However, the development of body image into emerging adulthood is unknown. It is also not clear the extent to which changes in body image during this time might parallel changes in actual body size. Students are often warned about the “freshman 15” phenomenon, or gaining 15 pounds during the first year of college. Thus, the potential for both weight gain and body image problems during this time suggests the importance of comparing trends in BMI and in body image.

In the present study, the goal is to understand body image development during the early part of college among men and women who identify as European American, African American, and Latino American, and whether this development parallels changes in BMI. We also model factors that are highly relevant to college students’ lives as predictors of body image itself and of changes in body image, including BMI, gendered personality traits, religiosity, and participation in fraternity/sorority life.

Predictors of body image

**BMI**

We examine BMI in two ways: as a variable that may parallel changes in body image, and as a control in models predicting body image. First, it is particularly important to examine trends in BMI and body image in first year college students. Most of these students are living away from home for the first time, and therefore, must make independent health-related decisions. Students’ health habits (e.g., consuming more fast food) might increase their risk for weight gain and subsequent body dissatisfaction. For example, Megel et al. (1994) found an association between health-promoting behaviors and weight satisfaction in first year female college students. Some work shows that students gain an average of nearly 2 kilograms during
their first semester (Levitsky, Halbmaier, Mrdjenovic, 2004), whereas others show no significant weight gain after 6 months at college (Hodge, Jackson, & Sullivan, 1993), or at the end of the first year of college (Graham & Jones, 2002;). Thus, it appears that the “freshman 15” phenomenon is a myth, but some students might experience a small weight gain during the transition to college. Regardless of whether weight gain actually occurs, the perception of this myth is important. That is, Graham and Jones found that students who believe in the “freshman 15” more have poorer views of their body and are more likely to think they are overweight.

We also included BMI as a control in models predicting body image. In the US, weight gain or being overweight is considered undesirable, but tends to be seen as worse for women than for men (Rodin, Silberstein, & Striegel-Moore, 1984). Accordingly, the association between larger size (BMI), and poorer body image has been found in female European American adolescents and adults (Markey, Markey, & Birch, 2004; Striegel-Moore et al., 2000). The link between these constructs is less well-established in men and individuals from other ethnic groups, but there is some evidence that it does exist in these groups (Smith, Thompson, Raczynski, & Hilner, 1999; Striegel-Moore et al., 2000; Yates, Edman, & Aruguete, 2004). For these reasons, it is important to account for BMI when examining body image.

**Gendered Personality Traits**

During the transition to college, students may question their identity as masculine and feminine individuals as they increasingly become exposed to individuals in non-gender stereotypical majors, and to female faculty members who have important roles in the university. There is a significant amount of cross-sectional work that has focused on the association between gendered personality traits—instrumentality (masculinity) and expressivity (femininity)—and body image. In the current study, we extend this work by using longitudinal methods to examine
whether gendered personality traits are meaningful for body image in the longer term. The discrepancy theory (Steiner-Adair, 1986) is an idea from the eating disorders literature that argues that women with these disorders tend to be low in masculinity (Johnson & Petrie, 1995). Given that poor body image is strongly linked to the development of eating disorders, it can be argued that women with poor body image may also be low in masculinity. In support of this argument, previous studies have found links between body dissatisfaction and low masculinity in women, and less frequently, in men (Gillen & Lefkowitz, 2006; Hawkins, Turell, & Jackson, 1983; Kimlicka, Cross, & Tarnai, 1983).

Although not as relevant for understanding body dissatisfaction, femininity has demonstrated important associations with another aspect of body image—orientation toward appearance. Gender schema theory (Bem, 1981) suggests that individuals who are more sex-typed (women who are high in femininity and men who are high in masculinity) are more sensitive to cultural sex-specific messages that encourage thinness in women and leanness and muscularity in men. To achieve these “feminine” ideals they aspire to, women may invest more in their appearance. In support of this idea, studies suggest that women who are more feminine and men who are more masculine are more oriented toward their appearance (Andersen & Bem, 1981; Timko, Striegel-Moore, Silberstein, & Rodin, 1987). One study, however, found that both men and women who are more feminine are more oriented toward their appearance (Pliner, Chaiken, & Flett, 1990).

A fairly new construct in the literature is inauthentic self in relationships, or the extent to which individuals internalize an inauthentic self in their relationships with others, a behavior that is considered to be socially appropriate yet unhealthy for girls and women (Tolman & Porche, 2000). Previous studies have found that men and women who are more inauthentic in their
relationships are less satisfied with their overall bodies as well as with particular areas of the body (Gillen & Lefkowitz, 2006), and that women who engage in more self-sacrificing behaviors (a similar construct) have more bulimic dietary behaviors (Frank & Thomas, 2003).

Religiosity

In addition to exploring their masculine/ feminine identities, exploring religious views may be common for emerging adult undergraduates. At this point in their lives, many students are individuating from parents and experiencing advances in cognition, processes that may encourage the development of a personal religious philosophy (Rostosky, Wilcox, Wright, & Randall, 2004). Indeed, college students report greater exposure to and openness toward other religions, as well as increased questioning of both their own and others’ religions (Lefkowitz, 2005), factors that may promote the development of personal religious beliefs.

There is little existing research linking religiosity with body image, but some work offers insight into their potential association. The social control perspective in particular suggests that religiosity may be associated with more positive body image. According to this theory, religion serves as a control mechanism against participation in various deviant or risky behaviors (Rohrbaugh & Jesser, 1975). In support of this theory, studies show that young people who are more religious are less likely to engage in risky behaviors compared to those who are less religious (Abbott-Chapman & Denholm, 2001; Arnett, 1998). There are several pathways through which these associations may operate, including the sense of devoutness that religion may generate (Rohrbaugh & Jesser). Part of this sense of devoutness may include the feeling that one’s body is a sacred object created by a higher power that should be protected. A study of multigenerational African American families supports this idea (King, Burgess, Akinyela, Counts-Spriggs, & Parker, 2005), as these families’ beliefs about health and the body are drawn
from their faith, rather than from medicine. Work on college women also suggests links between religiosity and body image. For example, first and second year college women with a higher Quest orientation (a construct that includes exploring existential issues, doubting religion as positive, and openness to changing religious beliefs) reported more bulimia symptoms and were more dissatisfied with their bodies (Boyatzis & McConnell, 2006). Similarly, Varady (2002) found that among college women who dieted in the past year, those who were more religious had fewer eating disorder symptoms.

Another element of body image that may be linked to religiosity is orientation toward appearance. Women with more traditional attitudes about marriage have been found to be less oriented toward their appearance (Gillen & Lefkowitz, 2006). Religious individuals tend to have more conservative attitudes about men’s and women’s roles (Feltey & Poloma, 1991; Kulik, 2000), suggesting that they may also be less oriented toward their appearance. Within their religious groups, women in particular may be taught more traditional values of modesty and self-sacrificing behavior, values that downplay the importance of their own appearance.

*Participation in Fraternities/Sororities*

Universities offer students the opportunity to join a wide array of campus organizations, each with a set of common goals and values that members are expected to endorse. As emerging adults, college students are open to exploring new worldviews and perhaps adapting them as their own (Arnett, 2000). Thus, joining campus groups that endorse certain beliefs may influence students’ own way of thinking about the world, including their body image.

Greek organizations (i.e., sororities and fraternities) in particular may play a role in shaping students’ body image. Members of these groups often share living space within dormitories or private residences and spend much free time together. In terms of sorority women,
they show more body image disturbance relative to other female college students (Schulken, Pinciaro, Sawyer, Jensen, & Hoban, 1997). Although it is hard to determine the directionality of these effects, they may be at least partially due to social pressure and modeling of unhealthful behaviors. In support of this idea, one study showed that sorority women who followed sorority-wide norms for binge eating were more popular, and that those who became more close with their sorority friends over time also grew more similar to them in binge eating behaviors (Crandall, 1988). Similarity in eating attitudes has also been found in other groups of college women who choose to live together, suggesting that social norms may be an important factor in shaping sorority women’s body image (Gilbert & Meyer, 2004).

In contrast, there is no published work that has specifically examined fraternity men’s body image. One study found that first year fraternity men reported higher self-esteem than first year non-fraternity men (Brand & Dodd, 1998). Given that self-esteem is positively associated with body image (Davison & McCabe, 2005), it is possible that fraternity men may also have a more positive body image than non-fraternity men, although more research is needed to determine this link.

Summary and Research Questions

In sum, there are few longitudinal studies of body image, particularly among the population examined here—an ethnically diverse group of male and female college students. Considering the high rates of body image problems on college campuses and the formative nature of this time period, it is important to understand how body image develops in college students, and whether changes in body image parallel changes in actual body size. Moreover, we are particularly interested in understanding the significance of the first semester of college for body image. That is, do students’ attitudes and experiences during this time matter for their body
image? Because there is little previous work in this area, research questions rather than directional hypotheses are presented.

1. Does BMI change across the transition to college, and does this change vary by gender and ethnicity? Does body image change across the transition to college, and does this change vary by gender and ethnicity? Do changes in body image parallel changes in BMI?

2. Are BMI, gendered personality traits, religiosity, and participation in fraternity/sorority groups during the first semester of college associated with body image and changes in body image?

Method

Participants

Undergraduates from a large Northeastern university participated in a longitudinal study. All African American and Latino American students, as well as a randomly selected sample of European American students (9%) were contacted in September of their first year (Fall 2002, Time 1). Because we were interested in understanding the experiences of emerging adult or traditional age students, only those between the ages of 17 and 19 were selected to participate. Of those who were contacted (839 students), over half (52%) agreed to participate. Participants completed a survey in a classroom-based setting that took approximately 1 hour, and were compensated $25 for their time. At the beginning of the following semester (Spring 2003, Time 2), students were invited to complete the survey again, receiving $30 for their time. The third wave of data collection took place when students returned to campus the following semester (Fall 2003, Time 3), for which they were given $35.

Of the original 434 students who completed surveys at Time 1, 414 (95%) returned to
complete surveys at Time 2, and 390 (90%) returned to complete surveys at Time 3. Of the students who completed surveys at Time 1 but did not return for Time 3 ($N = 44$), 84% were no longer eligible to participate. Specifically, these individuals were deceased ($N = 1$), or were no longer enrolled in the university or were on leave ($N = 32$). The remaining students refused to participate ($N = 4$), or were unreachable ($N = 7$). To determine if there were any attrition biases, individuals who completed surveys at Time 3 ($N = 390$) were compared to those who did not complete surveys at Time 3 ($N = 44$) on demographic characteristics and all other Time 1 variables in the study. Five chi-square tests and 12 t-tests were performed, and 3 were significant. Individuals who were no longer in the study at Time 3 differed significantly in ethnicity ($\chi^2 (2, 434) = 7.3, p <.05$), father’s marital status ($\chi^2 (4, 426) = 12.7, p <.05$), and mother’s level of education ($t = 2.4, p <.01$). Specifically, those who were no longer in the study at Time 3 were more likely to be Latino American or African American, were more likely to have fathers who had a partner other than their mother, had an “other” marital status, or were deceased, and had mothers with a lower level of education.

Of the 390 students at Time 3, 54% were women. At Time 3, participants’ ages ranged from 18.5 to 20.8 years ($M = 19.5; SD = 0.4$). Thirty two percent identified as African American, 27% as Latino American, and 41% as European American. Approximately two-thirds (67%) of participants reported that their parents were married to each other. Students also self-reported their religious identities. Most identified as Protestant (42%) or Catholic (40%); others identified as Jewish (4%), Muslim (0.3%), Agnostic or no religion (11%), or other (2%).

*Measures*

All measures were completed at Time 1, during students’ first semester of college. BMI and body image measures, however, were completed at all three time points.
Body mass index. Participants reported their height in inches and weight in pounds. Based on these data, their body mass index was calculated using the English formula (see CDC, 2006).

Instrumentality/Expressivity. Instrumentality and expressivity were assessed by the Bem Sex Role Inventory—short form (Bem, 1974). These constructs are considered to be socially desirable aspects of masculinity and femininity, respectively. Participants were asked to rate the extent to which they can be described by 10 instrumental (e.g., independent), and 10 expressive (e.g., sympathetic) adjectives. Responses were on a scale ranging from 1 = never or almost never true, to 7 = always or almost always true. Reliability in the present study was satisfactory for instrumentality ($\alpha = .84$), and for expressivity ($\alpha = .89$), and compared to those reported by Campbell, Gillaspy, and Thompson (1997).

Inauthentic Self in Relationships. The Inauthentic Self in Relationships measure is a subscale of Tolman and Porche’s (2000) Femininity Ideology Scale. This scale has 10 items, and assesses the extent to which individuals internalize an inauthentic self in their relationships with others, a negative yet socially appropriate quality for women (e.g., “I express my opinions only if I can think of a nice way of doing it”). Response options are on a scale ranging from 1 = strongly disagree to 5 = strongly agree. The authors report satisfactory reliability ($\alpha = .81$) in a sample of first year college students. Reliability in the current study was a bit lower ($\alpha = .65$).

Religiosity. Religion in Daily Life (Rohrbaugh & Jessor, 1975) assesses the impact of religion on daily life, and has 7 items (e.g., “When you have a serious personal problem, how often do you take religious advice or teaching into consideration?”), each with 4 to 5 responses (e.g., a = “almost always” to d = “never”). Higher scores indicate greater perceived impact of religion on daily life. Reliability in the present study was similar ($\alpha = .90$) to that reported by Rohrbaugh and Jessor.
Fraternity/sorority participation. Participants were asked whether they had joined any organizations on campus. If they circled “yes”, they were asked to write the name of any organizations that they had joined. Next, they were asked whether they had attended the meeting of any organizations on campus, not including the organizations that they had already joined. Again, if they circled “yes”, they were asked to write the name of the corresponding organization(s). These open-ended responses were categorized by a team of 3 students (2 undergraduates, 1 graduate), who were trained by the graduate student. Each student was assigned a set of responses, so that each response was categorized by 1 person. The graduate student frequently checked the other students’ work to address any problems. Students categorized participants’ responses as belonging to one of 12 organizations, including “social fraternity or sorority”. Responses were then dummy-coded to represent whether students had joined a fraternity/sorority, and whether they had attended a meeting of these organizations. Because data collection began early in students’ first semester of college, exposure to these organizations is best captured not only by membership in these groups, but by attending their meetings. Thus, we created a variable that represented whether students had joined or attended the meetings of fraternities/sororities (1 = has joined or attended meeting, 0 = has not joined or attended meeting). Fifteen percent of participants reported that they had joined or attended the meeting of a fraternity or sorority.

Body image. Four aspects of body image were assessed. Three of these aspects were subscales from the Multidimensional Body-Self Relations Questionnaire (Cash, 2000). Appearance orientation is a 10-item subscale that assesses the degree of cognitive and behavioral investment in appearance (e.g., “I am self-conscious if my grooming isn’t right”). Appearance evaluation is a 7-item subscale that measures the extent to which individuals are
satisfied with their overall appearance (e.g., “Most people would consider me good-looking). Both subscales offer responses ranging from 1 = definitely disagree to 5 = definitely agree. Body areas satisfaction has 9 items and assesses the extent to which individuals are satisfied with various parts of their body (e.g., “hair”, “mid torso”). Participants report their agreement on a scale ranging from 1 = very dissatisfied to 5 = very satisfied. Reliability for appearance orientation (T1, α = .87; T2, α = .88; T3, α = .87), appearance evaluation (T1, α = .88; T2, α = .90; T3, α = .88), and body areas satisfaction (T1, α = .79; T2, α = .80; T3, α = .81) was satisfactory and compared to those reported by Cash.

The fourth measure of body image, body dissatisfaction, was assessed by Thompson and Gray’s (1995) Contour Drawing Rating Scale. Participants were presented with a series of same-gender figures ranging from extremely thin (1) to obese (9), and asked to choose the figure that best represents their current size, and the figure that best represents their ideal size. Difference scores were calculated to represent the discrepancy between these values. A larger discrepancy between these values indicates a higher level of body dissatisfaction. Absolute value scores were used in all analyses because some work suggests that these scores may better capture men’s dissatisfaction, which tends to run in both directions (i.e., wanting to be smaller or larger; Cohn & Adler, 1992). Because group discussions with undergraduates at the same university revealed that the hair and faces of the figures were perceived to be European American, we removed the heads to increase the likelihood that participants of all ethnicities would identify equally with the figures. Patel and Gray (2001) performed a similar procedure in their study of African American undergraduates.

Thompson and Gray (1995) report good 1 week test-retest reliability in a sample of college women (r = .78). They also report good concurrent validity, as measured by the
associations between current body size rating and weight \((r = .71)\), and between current body size rating and BMI \((r = .59)\). Associations in the current study were similar at T1 (association for weight, \(r = .69\); association for BMI, \(r = .77\)), T2 (association for weight, \(r = .68\); association for BMI, \(r = .77\)), and T3 (association for weight, \(r = .65\); association for BMI, \(r = .71\)).

**Plan of Analysis**

Univariate multi-level modeling, using the SPSS MIXED procedure, was used to address our hypotheses. Unlike multiple regression, this technique allows for the modeling of within-person (Level 1) as well as between-person (Level 2) change, thus allowing us to test the extent to which individuals differ on average from others, and how they change over time themselves (Singer & Willett, 2003). Outcome variables in these full models are BMI and several measures of body image including appearance orientation, appearance evaluation, body areas satisfaction, and body dissatisfaction. Level 1 includes time (3 occasions), which was nested within person. Time represents students’ semester standing (i.e., semesters 1, 2, and 3) because time spent in the college environment is the indicator likely to be most important for BMI and body image. In order to facilitate interpretation, time was recoded so that Time 1 is the intercept (i.e., Time 1 = 0, Time 2 = 1, Time 3 = 2). Between-person (Level 2) predictors were fixed at Time 1 so that we could understand whether factors present in the first semester of college were important for overall body image (at the intercept) and for the changes in body image over time (impacting the slope in time \(\times\) predictor interactions). In order to illustrate trends in BMI and body image over time, mean scores on all these measures are presented separately by gender in Table 1.3.

**Results**

**Model Specification**

We tested for quadratic effects of time, but comparisons of model fit, indexed by REML
deviance, showed that they were non-significant. Therefore, we model linear effects of time in all models. We also tested for fixed and random effects of time for each dependent variable. In the model predicting BMI, REML deviance difference (2) = 61.23, $p < .01$ indicated that including the random effect of time improved the model. Information criteria also improved when random effects of time were added, using AIC and BIC (in smaller is better form; AIC improving from 5421.0 to 5363.8, and BIC changing little from 5431.3 to 5384.2). In 3 of the 4 the body image models, adding random effects of time improved the models, using REML deviance difference as the index (appearance orientation, REML deviance difference (2) = 8.62, $p < .05$, AIC from 7728.3 to 7723.7, BIC from 7738.5 to 7744.2; appearance evaluation, REML deviance difference (2) = 7.44, $p < .05$. AIC from 6827.9 to 6824.4, BIC from 6838.1 to 6844.9; body areas satisfaction, REML deviance difference (2) = 13.5, $p < .01$, AIC from 6998.9 to 6989.4, BIC from 7009.1 to 7009.9). Note that AIC improved in all of these models whereas BIC did not. We relied on REML deviance difference as the primary index because it tests whether models differ significantly from one another, whereas AIC and BIC indices do not have significance tests. Thus, in all three of these models, both fixed and random effects of time are included as predictors. In the fourth model predicting body dissatisfaction, adding the random effect of time did not improve the model (REML deviance difference (2) = 0.68, $p > .05$, AIC from 2728.5 to 2731.8, BIC from 2738.7 to 2752.3). In this model, we include only fixed effects of time.

In addition to modeling fixed and in some cases random effects of time, we included a number of between-person predictors in the final models. Of these between-person predictors, demographic variables included gender (0 = men, 1 = women) and ethnicity (0 = European American and Latino American, 1 = African American), allowing us to understand whether men
differ from women and whether African Americans differ from European Americans and Latino Americans in their body image\(^1\). Past research has shown that African Americans have a more positive body image than do individuals who identify as members of these other groups (Miller et al., 2000). Two-way interactions with time were also included in order to understand whether the development of body image over the first three semesters of college differs for men and women, and for African Americans as compared to European Americans and Latino Americans. Other fixed predictors include gendered personality traits, religiosity, and participation in fraternities/sororities. These variables were entered only in the body image models because we expect that they would be associated with body image, but not BMI. These predictors allow us to understand whether individuals who are higher in gendered personality traits and religiosity, and who participate in fraternities/sororities during their first semester of college are more likely to have more positive body image. All two-way interactions between these variables and time were also entered. These interactions test whether those who were initially higher on these Time 1 factors (e.g., more religious) have different patterns of change in body image over time. For example, we can see whether people who begin as more religious tend to increase more in body image over time as compared to those who were initially less religious.

*Predicting BMI*

We first examined changes in BMI across the transition to college (see Table 2.3). Variance estimates show that 93% of the variance in BMI was between individuals (intraclass correlation \([\text{ICC}] = 0.93\)). In the final model, gender and ethnicity were significant predictors, indicating that men had larger BMIs than women, and African Americans had larger BMIs than European Americans and Latino Americans. There was also a marginally significant interaction

\(^1\) Note that we also created a variable that allowed us to compare Latino Americans to African Americans and European Americans, but when entered into the BMI and body image models, this variable was never significant.
between gender and time, indicating that women’s BMI increased, whereas men’s remained largely the same (see Figure 1.3).

**Predicting Body Image**

We also examined change in multiple aspects of body image across the transition to college. The first model we tested was for **appearance orientation**. Variance estimates show that most of the variance in appearance orientation was between individuals (ICC = 0.83). Results of this model demonstrate that gender, ethnicity, inauthentic self in relationships, and religiosity were significant predictors (see Table 3.3). Women were more oriented toward their appearance than were men, and African Americans were more oriented toward their appearance than were European Americans and Latino Americans. Individuals who were more inauthentic in their relationships with others and who were more religious during their first semester of college were more oriented toward their appearance. In addition to these main effects, there was also a significant interaction between inauthentic self in relationships and time. We performed a median split on inauthentic self in relationships in order to illustrate this interaction graphically. Individuals who were less inauthentic in their relationships with others during their first semester of college grew more oriented toward their appearance over time, whereas those who were more inauthentic in their relationships during their first semester showed the opposite pattern (see Figure 2.3).

In the model predicting **appearance evaluation**, variance estimates indicate that most of the variance in this construct was between individuals (ICC = 0.81). There were significant main effects for gender, ethnicity, BMI, instrumentality, inauthentic self in relationships, and religiosity, as well as a marginally significant effect for joining or attending the meetings of fraternities/sororities (see Table 3.3). These effects indicate that men evaluated their appearance
in a more positive way than did women, and African Americans evaluated their appearance in a more positive way than did European Americans and Latino Americans. Also, individuals who had smaller BMIs, were more instrumental, less inauthentic in their relationships, more religious, and had joined or attended the meetings of fraternities or sororities during their first semester of college had more positive views of their appearance. There was also a significant interaction between gender and time, indicating that women’s positive views about their appearance increased between Time 1 and Time 3, whereas men’s changed relatively little (see Figure 3.3).

For body areas satisfaction, variance estimates show that most of the variance was between individuals (ICC = 0.79). In this model, significant main effects emerged for gender, BMI, instrumentality, inauthentic self in relationships, and religiosity (see Table 3.3). Men were more satisfied with their bodies than were women. Also, individuals who had smaller BMIs, were more instrumental, less inauthentic in their relationships with others, and more religious during their first semester of college were more satisfied with various parts of their body. There were also significant interactions for instrumentality × time and inauthentic self in relationships × time, and a marginally significant interaction for expressivity × time. We performed a median split so that groups that are high or low on these gendered personality traits could be compared graphically. Others have used a similar procedure with instrumentality and expressivity (Jackson, Sullivan, & Hymes, 1987; Kimlicka et al., 1983). Results show that individuals who were more instrumental during their first semester of college became satisfied with areas of their body at a slightly faster rate compared to those who were less instrumental at this time (see Figure 4.3). Individuals who were initially more inauthentic in their relationships with others during their first semester of college became satisfied with areas of their body at a slightly faster rate compared to those who were less inauthentic in relationships at this time (see Figure 5.3). Also,
individuals who were less expressive during their first semester of college grew satisfied with areas of their body at a slightly faster rate compared to those who were more expressive at this time (see Figure 6.3).

The final aspect of body image we examined was body dissatisfaction. Seventy two percent of the variance in body dissatisfaction (ICC = 0.72) was between people. In this model, there were significant main effects for gender, BMI, instrumentality, inauthentic self in relationships, and religiosity (see Table 3.3). That is, women were more dissatisfied with their bodies than were men. Also, individuals who had larger BMIs, were less instrumental, more inauthentic in their relationships with others, and less religious during their first semester of college were more dissatisfied with their bodies.

Discussion

In the present study, we examined changes in body image during the early college years. We also explored whether these changes corresponded to changes in actual body size (BMI). Results showed relative stability in body dissatisfaction. Orientation toward appearance and satisfaction with areas of the body were also fairly stable, although gendered personality traits predicted small change in these areas. Trends for appearance evaluation demonstrate that women grew more satisfied with their overall appearance, in spite of a slight increase in their BMI, whereas men stayed relatively the same.

Changes in Body Image over Time

Our first goal was to examine whether there was change over time in body image, and whether these changes varied by gender and ethnicity. Results indicated the importance of examining multiple facets of body image, as constructs changed (or did not change) in various ways. During the transition to college, individuals remained fairly stable in their body
dissatisfaction, a measure of global satisfaction with weight/ body shape, rather than with overall appearance, or aspects of appearance. A thin body size is considered ideal in US society (Striegel-Moore et al., 1986), particularly among European Americans (Aruguete, Nickleberry, & Yates, 2004; Markey, 2004). Students in the current study were at a predominantly European American university. It is possible that students who attend this school may have been raised in communities with similar populations. Thus, for the students in the current study, the transition from residing in communities with largely European American populations, to peers with the same characteristic, is unlikely to produce any change in beliefs about body size.

Similarly, orientation toward appearance remained fairly constant during this transition period. Orientation toward appearance includes not only cognitive but behavioral aspects as well (Cash, 2000). These behaviors may have been learned at an early age and, over time, may have developed into stable habits. In support of this point, previous research shows that appearance-related behaviors, such as eating patterns (Birch, 1990) and tanning (Sjoberg, Holm, Ullen, & Brandberg, 2004) are fairly well-established before emerging adulthood. Thus, the transition to college may play a minimal role in altering these sorts of behaviors.

Satisfaction with areas of the body also did not demonstrate significant change. This measure captures satisfaction with discrete areas of the body, areas that change quite a bit during adolescence (Tanner, 1971). The nature of these physical changes might give rise to feelings of awkwardness or embarrassment, such as increased acne, changes in hair texture, or the “gangly” appearance of limbs. By the time most individuals enter emerging adulthood, these pubertal changes have ended and their appearance is closer to that of adults. Because these features are likely to remain relatively unchanged throughout emerging adulthood, it is reasonable that individuals’ satisfaction with these areas would remain fairly stable during this time.
Appearance evaluation demonstrated differential changes by gender, with women’s positive views of their appearance increasing, and men’s staying relatively the same. This finding was surprising because others have noted the appearance-related competition that exists on college campuses (Striegel-Moore et al., 1986), suggesting that this pressure might promote more negative feelings about appearance. Our findings, on the other hand, suggest that more time spent in college may actually be beneficial for women’s body image. It is possible that for women, their entry into college may represent a low point in their evaluation of their own appearance. During this time, women are transitioning from being seniors in high school, where their identities and support networks may already be well-established, to the unfamiliarity of a new environment, where these comforts are likely no longer in place. As women spend more time in college and re-establish or re-create these areas of their lives, their evaluation of their appearance grows more positive. Given that relationships are more important in girls’ and women’s identities than they are in boys’ and men’s (Gilligan, 1982), it is evident that this transitional period—where identities and relationships may be uncertain—may have a greater impact on female students’ feelings than on male students’ feelings about their appearance.

It is noteworthy that women experienced these positive changes in evaluation of appearance in spite of a simultaneous slight increase in their BMI. Larger BMI is associated with poorer body image in women both cross-sectionally (Yates et al., 2004) and longitudinally (Stice & Whitenton, 2002), making these results fairly surprising. However, the measure of appearance evaluation does not necessarily capture satisfaction with body size, but instead addresses evaluation of appearance as a whole. Thus, trends in satisfaction with overall appearance would not necessarily parallel trends in body size.

Although women did demonstrate improvement in evaluation of appearance, it is
important to note that there were still overall gender differences in this area. That is, although women felt more positively about their appearance over time, their mean scores in this area never exceeded men’s. These gender differences have been found in prior cross-sectional work (Gillen & Lefkowitz, 2006; Miller et al., 2000), and are most likely due to the greater pressure on women to embody cultural standards of beauty.

There were overall ethnic differences in some aspects of body image, in that African Americans were more oriented toward their appearance and evaluated their appearance more favorably than did European Americans and Latino Americans. These findings are consistent with previous cross-sectional work (Gillen & Lefkowitz, 2006; Miller et al., 2000). African Americans’ greater orientation toward appearance may reflect the importance of fashion and style as a means through which they express their identity (Majors & Billson, 1992; Parker et al., 1995), and their more positive evaluations of appearance may represent greater flexibility in their standards of beauty, at least for women (Parker et al.; Rucker & Cash, 1992). In spite of these mean differences, body image development did not differ by ethnic group. That is, although mean differences remained, all students’ body image developed in much the same way. It is possible that sharing ecological changes (Maggs, 1997), such as living with same-age peers and choosing an academic path, may promote a similar course of body image development for all students, regardless of ethnic group membership.

**Predictors of Body Image and of Change in Body Image**

**BMI.** Our second goal was to examine whether various factors present during the first semester of college were associated with body image and with change in body image. Individuals with smaller BMIs during their first semester of college viewed their appearance in a more positive way, were more satisfied with areas of their body, and were less dissatisfied with
their overall body shape. These associations are not surprising in the context of a culture that admires thinness and devalues fat (Striegel-Moore et al., 1986). However, students’ body size during their first semester of college did not predict change in their body image. Thus, although students’ BMI plays a role in their body image, BMI during the first semester of college does not seem to be a critical factor in students’ body image development. During their first semester at college, students are experiencing a number of ecological changes (e.g., making new friends, living away from parents) that may briefly shift focus away from their body size. As they progress through this transitional period, it is possible that body size might begin to play a more important role in changing the course of their body image development. Future studies that address this question would be beneficial.

Gendered personality traits. We were also interested in understanding the role of gendered personality traits in body image and its development. These traits, particularly instrumentality and inauthentic self in relationships, emerged as important predictors of body image. Individuals who were more instrumental during their first semester of college evaluated their appearance in a more favorable way, were more satisfied with various parts of their body, and were less dissatisfied with their overall body. These findings are similar to those in cross-sectional studies (Gillen & Lefkowitz, 2006; Hawkins et al., 1983; Kimlicka et al., 1983). They also support the discrepancy theory (Steiner-Adair, 1986), which suggests that women who are less masculine are more likely to experience body image problems; our findings indicate that this idea may apply to both genders. Thus, it seems that instrumentality, a trait representing independence and assertiveness, may be an important protective factor for both men and women against poor body image.

Inauthentic self in relationships also emerged as an important predictor of body image.
Individuals who were more inauthentic in their relationships during their first semester of college were more oriented toward their appearance, evaluated their appearance in a less favorable way, were less satisfied with areas of their body, and were more dissatisfied with their overall body. These findings suggest that these individuals lack a general confidence—an insecurity not only in their inner selves, but in their external physical appearance as well. This insecurity seems to manifest not only through poorer attitudes about appearance, but also through greater cognitive and behavioral investment in appearance. In prior work (Gillen & Lefkowitz, 2006), we found concurrent associations between inauthentic self in relationships and the evaluative measures of body image, but current findings suggest that this construct is also linked to greater investment in appearance.

All three of these gendered personality traits—instrumentality, expressivity, and inauthentic self in relationships—predicted change in areas of body image. Specifically, inauthentic self in relationships significantly predicted change in appearance orientation, but this change was fairly small. Individuals who were more or less inauthentic in their relationships with others during the first semester of college converged, or grew more similar, in their orientation toward appearance over time. This trend suggests that being more inauthentic in relationships with others during the first semester of college does not pose longer-term risks for appearance orientation, as those who are initially higher in this trait become less oriented toward their appearance over time. Although those who were initially lower in this trait grew more oriented toward their appearance, the change was not steep, and thus may simply represent regression toward the group average. This movement toward the group average may be driven by spending more time together in a campus environment with widespread expectations for the degree to which students should be invested in their appearance (e.g., how dressed up students should be
for parties).

Gendered personality traits also predicted change in body areas satisfaction—
instrumentality and inauthentic self in relationships were significant predictors, whereas
expressivity predicted at a trend level. Similar to above, these coefficients explained small
changes in body areas satisfaction. Because these coefficients were fairly small, results should be
interpreted with caution. This point is reflected in the graphical illustrations of these findings,
where interactions are not apparent, but instead, main effects seem to be evident (see Figures 4.3,
5.3, and 6.3). That is, although groups high and low on these traits differ considerably in level,
they change at a fairly similar rate. Thus, it seems that gendered personality traits are associated
with body image, but having more or less of these traits during the first semester of college plays
a fairly minimal role in body image development.

Religiosity. Individuals who were more religious were more oriented toward their
appearance, more satisfied with areas of their body, had more positive views of their appearance,
and were less dissatisfied with their overall bodies. Previous work on African American families
(King et al., 2005) suggests that those who are more religious may feel that their bodies are
sacred objects that should be protected. This belief may manifest in investing more in their
bodies, a means of showing respect and devotion to a higher power. It may also emerge in
feeling more satisfied with the physical selves they have been given. Although religiosity was
associated with body image, it did not predict change in body image. That is, those who were
more religious tended to feel more positive about their bodies, but being more religious during
the first semester of college did not positively impact students’ body image development.

Participation in fraternities/sororities. Joining or attending the meetings of
fraternities/sororities during the first semester of college was not significantly associated with
body image, or change in body image. However, there was a trend demonstrating that those who had joined or attended the meeting of a fraternity or sorority evaluated their appearance in a more positive way. It is possible that selection into these groups may explain this trend, such that those who join or attend the meetings of fraternities or sororities have more positive views of their appearance than who do not participate in these groups. Because fraternities and sororities are social organizations, where frequent interactions with members of same-sex and opposite-sex peers are often required, those who take the initiative to join or attend their meetings may have more confidence in their looks. These findings differ from previous work, perhaps because students were just beginning their association with these groups. For example, previous work suggests that sorority membership is associated with greater body image disturbance (Schulken et al., 1997). Another study of mostly sophomores and juniors living in sorority houses found that as women developed closer relationships, their binge eating behaviors became more similar (Crandall, 1988). Thus, it is possible that the short period of exposure to these organizations was not long enough for the group culture to play a role in body image, and that effects may not emerge until later on in college, when students are more immersed in these groups. Future longitudinal studies extending through the end of college are needed to understand whether participation in these groups predicts change in the course of students’ body image development.

Limitations and Conclusions

It is important to point out the limitations of the study. First, we must be careful about drawing causal conclusions from the findings. Although longitudinal data indicate the temporal order of events, they cannot account for the influence of unmeasured variables on the outcomes. Second, results only pertain to the earlier part of college. Future studies should extend these findings by examining body image development through the senior year and beyond. Third, the
magnitude of the interaction effects with time was fairly small, indicating that gender and gendered personality traits played a fairly minor role in body image development. Given the size of these effects, these findings should be interpreted carefully. Fourth, it is important to recognize that the student population at this university, as well as the surrounding community, is largely European American. The ethnic minority students who attend this university may be different in a number of ways from those who attend universities with a larger proportion of ethnic minority students. For example, it is possible that those who choose to attend a largely European American university may have grown up in a similar kind of environment, suggesting that ethnic differences may be smaller in this study than those from an investigation at a more ethnically diverse college campus. Given this possibility, results should not be generalized to students at schools with a greater proportion of ethnic minority students. Results also should not be applied to emerging adults who are not students. It is possible that other factors may be driving these individuals' body image development, such as new work experiences or living arrangements.

Despite these limitations, this study adds to the literature in a number of ways. We know of no prior studies that have used longitudinal methods to examine body image development during college. Results of the present study suggest that the early part of college is marked by change in evaluation of appearance for women, but most other aspects remain fairly stable. Given the recent obesity epidemic, and its associated health outcomes (Committee on Prevention of Obesity in Children and Youth, 2005), we argue that the lack of general improvement in body image should not necessarily be seen in a negative way. Heinberg, Thompson, and Matzon (2001) argue that for normal weight or overweight individuals, a moderate level of body dissatisfaction might motivate them to engage in healthier habits. For the first year students in
this sample, whose average BMI was toward the upper end of the normal weight range, and for women in particular, whose BMI increased slightly during this transitional period, the lack of improvement in body image might not necessarily be a negative trend. Furthermore, in using a longitudinal design, we were able to uncover the relevance of factors present during the first semester of college for body image. Findings extend previous work by highlighting the importance of certain gendered personality traits for body image, and suggest that religiosity is important as well. Although studies are sometimes criticized for their reliance on college students as samples of convenience, here, we demonstrate that the transition to college is a critical period that is worthy of study in and of itself. As results suggest, the ecological changes that students experience during this time make this a dynamic period for body image development.

Further, the study included both men and women as well as individuals of different ethnicities, thus allowing us to test whether changes in body image vary by gender and ethnicity. Women did indeed improve in evaluation of appearance, although not enough to reach men’s levels. Body image development did not differ by ethnic group, suggesting that sharing similar ecological changes may promote a similar pathway of body image. To gain a complete picture of body image development in college students, it is important to continue investigating these processes into the latter part of college, as students navigate new challenges and opportunities.
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Table 1.3

*Mean scores on BMI and body image measures at Times 1, 2, and 3, separately by gender*

<table>
<thead>
<tr>
<th>Time</th>
<th>BMI</th>
<th>Appearance orientation</th>
<th>Appearance evaluation</th>
<th>Body areas satisfaction</th>
<th>Body dissatisfaction</th>
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<tr>
<td></td>
<td>M (SD)</td>
<td>M (SD)</td>
<td>M (SD)</td>
<td>M (SD)</td>
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<tr>
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<td>Men</td>
<td>Women</td>
<td>Men</td>
<td>Women</td>
<td>Men</td>
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<td>Time 1</td>
<td>22.96 (4.33)</td>
<td>24.58 (4.65)</td>
<td>42.83 (7.98)</td>
<td>39.07 (8.44)</td>
<td>23.92 (5.75)</td>
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<tr>
<td>Time 2</td>
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<td>24.62 (4.34)</td>
<td>43.16 (7.78)</td>
<td>38.27 (8.38)</td>
<td>24.15 (5.88)</td>
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<tr>
<td>Time 3</td>
<td>23.64 (4.54)</td>
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</tbody>
</table>

*Note.* Due to missing data, sample size ranged from $N = 177 – 207$ for men, and $N = 208 – 225$ for women.
### Table 2.3

**Multi-level model predicting BMI**

<table>
<thead>
<tr>
<th></th>
<th>Estimate (SE)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fixed effects</strong></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>23.86 (0.34)*****</td>
</tr>
<tr>
<td>Time</td>
<td>0.10 (0.08)</td>
</tr>
<tr>
<td>Gender</td>
<td>-1.45 (0.42)*****</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>1.93 (0.45)*****</td>
</tr>
<tr>
<td>Gender × time</td>
<td>0.17 (0.10)^</td>
</tr>
<tr>
<td>Ethnicity × time</td>
<td>0.08 (0.10)</td>
</tr>
<tr>
<td><strong>Variance components</strong></td>
<td></td>
</tr>
<tr>
<td>Residual variance</td>
<td>0.81 (0.06)</td>
</tr>
<tr>
<td>Intercept variance</td>
<td>18.53 (1.31)</td>
</tr>
<tr>
<td>Intercept-time covariance</td>
<td>-0.39 (0.22)</td>
</tr>
<tr>
<td>Time variance</td>
<td>0.52 (0.08)</td>
</tr>
<tr>
<td><strong>Model fit</strong></td>
<td></td>
</tr>
<tr>
<td>Deviance</td>
<td>5327.5</td>
</tr>
<tr>
<td>AIC</td>
<td>5335.5</td>
</tr>
<tr>
<td>BIC</td>
<td>5355.9</td>
</tr>
<tr>
<td>Number of parameters</td>
<td>10</td>
</tr>
</tbody>
</table>

^p < .09; ***p < .001
Table 3.3

Multi-level model predicting body image

<table>
<thead>
<tr>
<th></th>
<th>Appearance orientation</th>
<th>Appearance evaluation</th>
<th>Body areas satisfaction</th>
<th>Body dissatisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate (SE)</td>
<td>Estimate (SE)</td>
<td>Estimate (SE)</td>
<td>Estimate (SE)</td>
</tr>
<tr>
<td><strong>Fixed effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>38.28(0.69)***</td>
<td>24.91(0.41)***</td>
<td>32.34(0.42)***</td>
<td>0.87(0.07)***</td>
</tr>
<tr>
<td>Time</td>
<td>-0.29(0.24)</td>
<td>-0.04(0.17)</td>
<td>0.18(0.18)</td>
<td>0.03(0.03)</td>
</tr>
<tr>
<td>Gender</td>
<td>3.79(0.84)***</td>
<td>-2.10(0.49)***</td>
<td>-2.55(0.51)***</td>
<td>0.51(0.08)***</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>1.88(0.91)*</td>
<td>1.69(0.54)**</td>
<td>0.85(0.55)</td>
<td>-0.05(0.09)</td>
</tr>
<tr>
<td>BMI</td>
<td>0.00(0.09)</td>
<td>-0.53(0.05)***</td>
<td>-0.49(0.05)***</td>
<td>0.11(0.01)***</td>
</tr>
<tr>
<td>Instrumentality</td>
<td>0.04(0.05)</td>
<td>0.11(0.03)***</td>
<td>0.10(0.03)**</td>
<td>-0.02(0.00)***</td>
</tr>
<tr>
<td>Expressivity</td>
<td>0.04(0.05)</td>
<td>0.01(0.03)</td>
<td>0.05(0.03)</td>
<td>0.01(0.00)</td>
</tr>
<tr>
<td>Inauthentic self in</td>
<td>0.23(0.07)***</td>
<td>-0.20(0.04)***</td>
<td>-0.24(0.04)***</td>
<td>0.02(0.01)*</td>
</tr>
<tr>
<td>relationships</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religiosity</td>
<td>0.14(0.07)*</td>
<td>0.08(0.04)*</td>
<td>0.15(0.04)***</td>
<td>-0.02(0.01)*</td>
</tr>
<tr>
<td>Join or attend meeting of</td>
<td>1.40(1.11)</td>
<td>1.13(0.65)^</td>
<td>-0.07(0.67)</td>
<td>-0.06(0.11)</td>
</tr>
<tr>
<td>fraternity/ sorority</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender × time</td>
<td>0.19(0.29)</td>
<td>0.51(0.20)**</td>
<td>0.20(0.22)</td>
<td>0.00 (0.04)</td>
</tr>
<tr>
<td>Ethnicity × time</td>
<td>0.13(0.31)</td>
<td>-0.21(0.22)</td>
<td>0.09(0.24)</td>
<td>-0.01(0.04)</td>
</tr>
<tr>
<td>BMI × time</td>
<td>0.01(0.03)</td>
<td>0.02(0.02)</td>
<td>0.00(0.02)</td>
<td>-0.01(0.00)</td>
</tr>
<tr>
<td>Instrumentality × time</td>
<td>-0.01(0.02)</td>
<td>0.00(0.01)</td>
<td>0.03(0.01)*</td>
<td>0.00 (0.00)</td>
</tr>
<tr>
<td>Expressivity × time</td>
<td>-0.01(0.02)</td>
<td>-0.01(0.01)</td>
<td>-0.02(0.01)^</td>
<td>0.00 (0.00)</td>
</tr>
<tr>
<td>Inauthentic self in</td>
<td>-0.05(0.02)*</td>
<td>0.02(0.02)</td>
<td>0.04(0.02)*</td>
<td>0.00 (0.00)</td>
</tr>
<tr>
<td>relationships × time</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religiosity × time</td>
<td>0.01(0.02)</td>
<td>0.00(0.02)</td>
<td>-0.01(0.02)</td>
<td>0.00 (0.00)</td>
</tr>
<tr>
<td>Join or attend meeting of</td>
<td>0.10 (0.38)</td>
<td>0.24(0.26)</td>
<td>-0.05(0.29)</td>
<td>-0.02(0.05)</td>
</tr>
<tr>
<td>fraternity/ sorority × time</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Variance components**

|                           |                        |                       |                        |                     |
|---------------------------|------------------------|-----------------------|------------------------|                     |
| Residual variance         | 9.92(0.72)             | 5.25(0.39)            | 5.54(0.41)             | 0.26(0.01)          |
| Intercept variance        | 55.17(4.51)            | 17.73(1.60)           | 18.83(1.69)            | 0.39(0.03)          |
| Intercept-time covariance | -1.59(1.21)            | -0.34(0.52)           | -0.73(0.59)            | --                  |
| Time variance             | 1.93(0.63)             | 0.69(0.32)            | 1.32(0.38)             | --                  |
Table 3.3 (continued).

<table>
<thead>
<tr>
<th></th>
<th>Appearance orientation</th>
<th>Appearance evaluation</th>
<th>Body areas satisfaction</th>
<th>Body dissatisfaction</th>
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<tbody>
<tr>
<td></td>
<td>Estimate (SE)</td>
<td>Estimate (SE)</td>
<td>Estimate (SE)</td>
<td>Estimate (SE)</td>
</tr>
<tr>
<td><strong>Model fit</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deviance</td>
<td>7372.5</td>
<td>6408.6</td>
<td>6532.6</td>
<td>2541.7</td>
</tr>
<tr>
<td>AIC</td>
<td>7380.5</td>
<td>6416.6</td>
<td>6540.6</td>
<td>2545.7</td>
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<tr>
<td>BIC</td>
<td>7400.8</td>
<td>6436.8</td>
<td>6560.9</td>
<td>2555.8</td>
</tr>
<tr>
<td>Number of parameters</td>
<td>22</td>
<td>22</td>
<td>22</td>
<td>20</td>
</tr>
</tbody>
</table>

*Note. ^p < .09; *p < .05; **p < .01; ***p < .001*
Figure 1.3. Interaction between gender and time on BMI.
Figure 2.3. Interaction between inauthentic self in relationships and time on appearance orientation
Figure 3.3. Interaction between gender and time on appearance evaluation.
Figure 4.3. Interaction between instrumentality and time on body areas satisfaction.
Figure 5.3. Interaction between inauthentic self in relationships and time on body areas satisfaction
Figure 6.3. Interaction between expressivity and time on body areas satisfaction.
VITA
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Adolescent Development  Penn State University, University Park

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SELECTED CONFERENCE PRESENTATIONS

