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Adolescent Self-Esteem: Differences by Race/Ethnicity, Gender, and Age

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Abstract

Large-scale representative surveys of 8th-, 10th-, and 12th-grade students in the United States show high self-esteem scores for all groups. African-American students score highest, Whites score slightly higher than Hispanics, and Asian Americans score lowest. Males score slightly higher than females. Multivariate controls for grades and college plans actually heighten these race/ethnic/gender differences. A truncated scoring method, designed to counter race/ethnic differences in extreme response style, reduced but did not eliminate the subgroup differences. Age differences in self-esteem are modest, with 12th graders reporting the highest scores. The findings are highly consistent across 18 annual surveys from 1991 through 2008, and self-esteem scores show little overall change during that period.

Keywords

self-esteem; adolescence; race/ethnicity; gender differences; age differences; national sample

Global self-esteem, an individual's overall evaluation of self, is one of the most studied constructs in the social sciences. A wide and diverse literature that spans disciplines and theoretical perspectives suggests that high self-esteem is positively, though not necessarily causally, associated with goals, expectancies, coping mechanisms, and behaviors that facilitate productive achievement and work experiences; and it is negatively associated with mental and physical health problems, substance abuse, and antisocial behavior (e.g., Bandura, 1982; Brown, 1998; Donnellan, Trzesniewski, Robins, Moffitt, & Caspi, 2005; DuBois & Tevendale, 1999; Flory, Lynam, Milich, Leukefeld, & Clayton, 2004; Harter, 1998; O'Connor & Vallerand, 1998; Robins, Tracy, & Trzesniewski, 2008; Trzesniewski et al., 2006; but see Baumeister, Campbell, Krueger, & Vohs, 2003, for a more critical perspective).

Although self-esteem is a popular research topic, there are important outstanding issues, including how self-esteem relates to demographic characteristics such as race/ethnicity and, to a lesser extent, gender and age. The goal of this report is to address these issues using large-scale representative surveys of 8th-, 10th-, and 12th-grade students in the United States.

Individual differences in self-esteem can be reliably measured in countries as diverse as Argentina, Fiji, India, Lebanon, South Korea, and the United States (Schmitt & Allik, 2005). Accordingly, there has been long-standing interest in racial/ethnic differences in self-esteem (Bachman & O'Malley, 1984a; Gray-Little & Hafdahl, 2000; Twenge & Crocker, 2002). Two meta-analyses concluded that African Americans score higher on measures of self-esteem than Whites (Gray-Little & Hafdahl, 2000; Twenge & Crocker, 2002). In addition, Twenge and Crocker (2002) found that Asians report the lowest level of self-esteem, and Latinos fall between Whites and Asians. Likewise, Schmitt and Allik (2005) found that individuals from Japan reported lower self-esteem than individuals from the United States. Despite the robustness of these effects, explanations for these observed differences are contentious (e.g., Bachman & O'Malley, 1984a,b; Cai, Brown, Deng, & Oakes, 2007; Gray-Little & Hafdahl, 2000; Heine, Lehman, Markus, & Kitayama, 1999; Twenge & Crocker, 2002).

A considerable amount of attention has focused on explaining differences in self-esteem, especially between African Americans and Whites (e.g., Crocker & Major, 1989; Gray-Little & Hafdahl, 2000; Rosenberg, 1979). One of the oldest perspectives on this issue is the reflected appraisals theory. According to Mead (1934), self-esteem is affected by the reflected appraisals of generalized others—that is, perceptions of how generalized others (e.g., majority group members, society) view an individual or group. Thus, the prediction would be that, because African Americans are a stigmatized group in the United States (see Crocker & Major, 1989, p. 608), they will have lower self-esteem than members of the majority culture. It is less clear what the prediction would be for Asians, because some stereotypes for Asians are positive (i.e., the model minority stereotype). The bigger problem, however, is that this theory is not supported by existing data—African Americans seem to consistently report higher levels of self-esteem than Whites, whereas Asian Americans report the lowest levels.

A second explanation is based on social comparison processes. Like the reflected appraisals theory, a social comparison approach might be used to generate the prediction that ethnic minorities (e.g., African Americans) will have lower self-esteem than the ethnic majority (e.g., Whites) because of cross-group social comparisons (see Gray-Little & Hafdahl, 2000). For example, if African Americans, on average, are more disadvantaged and they compare themselves to Whites who, on average, are more advantaged, then African Americans will report lower levels of self-esteem. As noted above, this prediction is not empirically supported. An alternative possibility is that social comparisons are made *within* one's own ethnic group (e.g., Gray-Little & Hafdahl, 2000; Rosenberg, 1979), in which case African Americans would compare themselves to other African Americans and likely have just as many opportunities to make downward social comparisons as members of more advantaged groups.

Indeed, Crocker and Major (1989) suggested that there are several general self processes that are used to protect self-esteem of stigmatized groups. In addition to within-group social comparisons, they proposed that individual members of stigmatized groups attribute negative appraisals from others to prejudice against their group, and likewise individuals in stigmatized groups may not personally value the attributes that are devalued by the majority group. This proposal is largely consistent with the classical Jamesian notion that self-esteem

is a personal judgment of self-worth that is determined by how well individuals evaluate themselves on dimensions that they *personally value*. James noted that "our self-feeling in this world depends entirely on what we back ourselves to be and do" (James, 1985, p. 54). Although the Crocker and Major model can explain why researchers have not found clear evidence that Blacks score lower than Whites on measures of self-esteem, this approach does not seem well suited for explaining the differences that have been observed in self-esteem scores.

A more vexing recent question concerns why Asian Americans have lower self-esteem scores than Whites or African Americans. To account for this difference, it is relevant to consider the possibility that different cultural traditions give rise to different default patterns of behavior (e.g., Yamagishi, Hashimoto, & Schug, 2008; cf., Kim & Markus, 1999), and that these may extend to the expression of self-esteem as measured by pencil and paper scales. It is traditionally thought that East Asian cultures emphasize the importance of the group (hence the term "collectivist cultures"; see e.g., Markus & Kitayama, 1991). Accordingly, socialization practices in these cultures might not emphasize the expression of high self-esteem because such expressions could run counter to culturally valued attributes that promote group harmony, such as modesty, a sense of connectedness, and conformity (Kim & Markus, 1999). On the other hand, the expression of high self-esteem in more individualistic cultures might be encouraged given the cultural value placed on freedom and individual rights (Chao, 1995). Accordingly, we suspect that cultural differences in the expression of self-esteem may explain why Asian Americans score lower than Whites or African Americans on self-report measures. Indeed, existing research has shown that Asian Americans are more collectivistic than European Americans, whereas there were no detectable differences between African Americans and European Americans (Oyserman, Coon, & Kemmelmeier, 2002, p. 27).

We should briefly address a concern about the cultural construction of self-esteem that is relevant for the present investigation. Some authors have suggested that "self-esteem, as it is conventionally researched and understood, may be, in significant ways, a North American phenomenon" (Heine et al., 1999, p. 768; but see Sedikides, Gaertner, & Toguchi, 2003; Sedikides, Gaertner, & Vevea, 2007). This perspective does not seem easy to reconcile with evidence that the Rosenberg self-esteem scale has acceptable psychometric properties and similar relations with Extraversion and Neuroticism in Japan, India, and the United States (Schmitt & Allik, 2005). Thus, we believe there are compelling reasons to accept the notion that self-esteem is a relevant individual difference construct in many cultures and contexts. For the present paper, our point is that there might be differences in the "cultural press for the expression of high self-esteem" as it relates to responses on paper and pencil measures both within and across cultures. Indeed, recent work by Cai et al. (2007) suggests that Chinese individuals feel positively about themselves but that cultural norms related to modesty account for observed differences in self-esteem scores between Chinese and American research participants. Likewise, it appears that implicit measures of self-esteem are less likely to show differences between those from Asian countries and the United States (e.g., Yamagishi et al., 2008).

The cultural press explanation for the observed self-esteem difference may also explain why African Americans report higher levels of self-esteem than White Americans. That is, some scholars have suggested that African-American families strive to instill self-esteem in youth so that they will be able to cope with discrimination (reviewed in Hughes et al., 2006). Likewise, African Americans might emphasize their "desirable distinctiveness" (Gray-Little & Hafdahl, 2000, p. 26) and therefore report higher levels of self-esteem. In short, there are compelling reasons to think that a cultural press surrounding the expression of self-esteem offers a plausible explanation for some of the observed racial/ethnic differences. In line with

the previous arguments, we hypothesize that some of the group differences in self-esteem scores can be explained by differences in reporting styles, which may stem from disparate cultural emphases on expression as it relates to responses to survey instruments. In particular, we propose that African Americans are socialized to communicate pride and Asians are socialized to communicate humility.

Such culturally informed orientations may affect the way that participants respond to self-report questionnaires, particularly those that strongly emphasize self-values. This tendency might be evident as a consistent response style that reflects a reluctance to use the extreme ends of scales for individuals from collectivist cultures (e.g., Chen, Lee, & Stevenson, 1995). The opposite sort of response style (i.e., a greater willingness to use scale extremities) has been found among African-American participants; for example, Bachman and O'Malley examined 130 agree-disagree items from nationally representative surveys of high school seniors, and found that 63 of these items (48%) "…showed [a] pattern of greater percentages of blacks than whites at both scale extremes for all three years" (1984b, p. 496). This highly consistent pattern of greater African-American use of the scale extremes was evident across five different questionnaire forms covering a wide range of content area; moreover, these early findings were recently replicated and extended (Bachman, O'Malley, & Freedman-Doan, 2009). Such response style differences led the same authors in a separate article (Bachman & O'Malley, 1984a) to question whether the higher self-esteem *scores* of African-American students, compared with White students, reflected genuine group differences in self-esteem.

The Bachman and O'Malley (1984a) article used data from Monitoring the Future (MTF) surveys of high school seniors in 1980-1982 and showed that African-American students scored higher than White students on measures of self-esteem. That article also demonstrated that response styles can significantly affect so-called "balanced" index scores; this is because even though the *items* may be balanced (the measure of self-esteem used here consists of four items worded positively and four worded negatively), the *responses* often are not balanced. Most respondents choose self-esteem responses that are at least somewhat positive, whether that calls for agreement or disagreement. For example, Schmitt and Allik (2005) examined Rosenberg's measure of self-esteem across 53 nations, and found that all nations scored above the scale's midpoint, "…indicating generally positive self-evaluation may be culturally universal"; but they also noted "…a neutral response bias prevalent in more collectivist cultures" (p. 623). Likewise, there is agreement that the better-than-average effect is present in the responding of both Asians and European Americans, even if researchers debate the interpretation of the phenomenon (Heine, Kitayama, & Hamamura, 2007; Sedikides et al., 2007). Thus, for measures such as self-esteem, differences in a willingness or inclination to use the extreme responses (unqualified "Agree" or "Disagree," versus "Mostly Agree" or "Mostly Disagree") can influence overall scores. The earlier analyses by Bachman and O'Malley found that, although African-American students scored significantly higher than White students when the full-scale range was used in computing self-esteem scores, the "…discrepancy disappears when a truncated scoring method is employed to control differences in the use of extreme response categories" (Bachman & O'Malley, 1984a, p. 624). It is an open question as to whether this strategy will affect comparisons for Asian Americans and White Americans in more recent decades.

The Present Study

We are now able to extend the earlier MTF self-esteem findings along six dimensions: First, and most important, we enlarge the racial/ethnic comparisons to include Asian Americans and Hispanics, along with African Americans and Whites. Second, we report findings separately for males and females, thereby evaluating gender differences as well as gender

interactions with race/ethnicity. Third, we expand the age coverage by including 8th- and 10th-grade students as well as 12th graders. Fourth, we include more recent data and much larger samples, examining 18 years of school surveys (1991-2008). Fifth, we consider the important question of how racial/ethnic comparisons are affected by controls for three potentially relevant factors that vary across the subgroups: school grades, college plans, and parental education. Finally, we revisit the question of how truncating the response scale affects subgroup differences in self-esteem scores.

Specific Hypotheses

1. Based on the earlier findings summarized above, we expected to find relatively high self-esteem scores among African Americans and relatively low scores among Asian Americans, with White Americans and Hispanics in the middle.
2. Based on earlier research (e.g., Bachman & O'Malley, 1977; Bachman, O'Malley, & Johnston, 1978; Donnellan et al., 2005; Trzesniewski et al., 2006; Twenge & Crocker, 2002), we expected to find self-esteem scores positively correlated with parental education (a proxy for socioeconomic level), grade point average, and college plans across the racial/ethnic groups.
3. We expected the observed racial/ethnic differences in self-esteem to persist while controlling for parental education, grade point average, and college plans.
4. Again based on earlier research (Kling, Hyde, Showers, & Buswell, 1999; O'Malley & Bachman, 1979), we expected males to show self-esteem scores equal to or higher than those of females. We expected this difference to persist in analyses controlling for parental education, grade point average, and college plans.
5. Given earlier findings that self-esteem scores increase with age (Bachman et al., 1978; O'Malley & Bachman, 1983; Twenge & Campbell, 2001), we expected scores to be highest for 12th-grade respondents and lowest for 8th-grade respondents.[1]
6. Based on the previous research about response style differences in self-esteem (Bachman & O'Malley, 1984a), we expected that a truncated scoring of self-esteem items (combining Agree and Mostly Agree, and combining Disagree and Mostly Disagree) would reduce some subgroup differences in self-esteem scores. However, this approach might not completely remove all group differences (see Chen et al., 1995).

Methods

The MTF project is an ongoing study of secondary school students in the 48 contiguous United States, conducted by the Institute for Social Research at the University of Michigan. The study has been described extensively elsewhere (Bachman, Johnston, O'Malley, & Schulenberg, 2006; Johnston, O'Malley, Bachman, & Schulenberg, 2008); we provide a brief summary here.

Samples and Survey Procedures

Independent three-stage national probability samples of 8th-, 10th-, and 12th-grade students are surveyed each year in 120-160 public and private schools, selected to provide

[1]Any differences across grades would not necessarily be due entirely to age; the 10th-grade and especially the 12th-grade samples fail to represent the entire age cohort due to dropping out. Because dropouts tend to have lower than average self-esteem scores, differences across grades could reflect, at least in part, the absence of the dropouts from the older samples.

representative cross-sections of students throughout the coterminous United States. In the spring of each year, questionnaires are administered by professional interviewers from the University of Michigan during school hours, usually in regularly scheduled class periods. The questionnaires are designed for optical scanning, and can be completed by most respondents within 45 minutes. Usable questionnaires are obtained from about 84% of 12th graders and about 88% of 8th and 10th graders. Nonparticipation is due primarily to absenteeism, with only 1-2% refusing. The present report includes surveys from 1991-2008; analyses are limited to those respondents who were classified into one of the eight race/ethnicity/gender categories used, and who completed all eight self-esteem items without showing a straight-line responding pattern.[2]

Multiple questionnaire forms are used in all three grades; the question items featured in these analyses were administered to a random portion of each sample. Cases are weighted to take account of sampling design; weights are normalized so that the actual number of questionnaires (raw observations) is approximately equal to the weighted number. Weighted total numbers of cases for the analyses reported here equal or exceed 102,109 for 8th graders, 107,849 for 10th graders, and 107,421 for 12th graders. Significance tests and confidence intervals take account of design effects due to the stratified samples clustered in schools.

Questionnaire Content and Self-Esteem Measure

The MTF questionnaire content covers a wide range of topics, many of which differ from one questionnaire form to another. Data obtained from all respondents (across all questionnaire forms) include demographic information such as gender, race/ethnicity, parental education, region, and urban density; and educational information such as self-reported grade point average and college plans. Grade point averages, college plans, and parental education are included in multivariate analyses reported later.

The measure of race/ethnicity used in these analyses consists of responses to the following questionnaire item: “How do you describe yourself?” Prior to 2005, there was no explicit instruction about the number of responses to select; the great majority of respondents selected only one. Beginning in 2005, respondents were instructed to “select one or more responses.” (Relatively few selected more than one, and this change did not affect the results shown here.) The four subgroups used in the present analyses, and the relevant questionnaire response categories (shown in quotes), are as follows: (1) African American, “Black or African American”; (2) White, “White (Caucasian)”; (3) Hispanic, those choosing any of the following: “Mexican American or Chicano,” “Cuban American,” “Puerto Rican,” or “Other Hispanic or Latino”; (4) Asian American, “Asian American.”

Our primary focus is on the eight-item MTF measure of global self-esteem; this is a balanced set, with four items reverse scored. As shown in the appendix, six of the items were adapted from the Rosenberg (1965) self-esteem scale; two were adapted from Cobb, Brooks, Kasl, and Connelly (1966). Although the MTF self-esteem measure overlaps in content with the Rosenberg scale, we want to stress that scores are not directly comparable, because the MTF measure uses only six of the ten Rosenberg items (with three small wording changes), and also because the Rosenberg scale uses a different response scale. All

[2]*Straight-line responding* refers to giving exactly the same answer to a set of questions (for which identical answers seem inappropriate). For example, anyone answering “Agree” to four positively worded self-esteem items as well as four negatively worded items would be highly inconsistent, and we judged those few respondents to be not responding carefully to the questionnaire at that point. The same would apply to someone consistently answering “Disagree.” Although answering “Neither” to the eight self-esteem items would not be logically inconsistent, we still judged those few individuals also to be no longer fully engaged in answering the questionnaire.

of the MTF items use the following Likert-type response scale: Disagree (1), Mostly disagree (2), Neither (3), Mostly agree (4), Agree (5); the Rosenberg scale uses a four-point scale ranging from Strongly agree to Strongly disagree. The full MTF item wordings, along with response distributions for total samples and subgroups, are shown in the appendix. Self-esteem is computed as a mean based on all eight items; scores can range from 1.0 (lowest possible self-esteem) to 5.0 (highest possible).[3] Alpha coefficients for 8th-, 10th-, and 12th-grade samples are .85, .87, and .88, respectively.

A single questionnaire format was used for the self-esteem measure in all of the 8th- and 10th-grade surveys, whereas the 12th-grade self-esteem findings reported here combine the results from three separate questionnaire forms. In all of these questionnaire forms, the self-esteem items are mixed in with various other items measuring other constructs (which differ from form to form).[4] In one of the 12th-grade questionnaire forms, the set of items is very similar to those in the 8th- and 10th-grade questionnaires, whereas in the other two 12th-grade forms the contexts are different. Nevertheless, when examined separately the 12th-grade results were found to be virtually identical across the three forms, as are the alpha coefficients (.89, .87, and .87), leaving us confident that different questionnaire contexts for the 12th-grade students do not affect our findings.

Results

We begin our reporting by noting changes and consistencies in self-esteem responses from 1991 through 2008; based on those findings, we chose to combine data across all years for subsequent analyses. Next we examine self-esteem response distributions, comparing the four racial/ethnic subgroups for males and females at each of the three grades. We then present multivariate analyses showing how subgroup differences in self-esteem are affected by adjustments for differences in parental education, grade point averages, and college plans. Finally, we examine subgroup differences in proportions with the highest possible self-esteem scores, and consider the extent to which subgroup differences change when the response scale is truncated to reduce the effects of extreme response tendencies.

Preliminary Analysis Evaluating Changes in Self-Esteem Scores from 1991 through 2008

We examined mean self-esteem scores for males and females across the 18 years for which data are available for all three grades, and found some irregular variation from year to year, along with some suggestions of very weak trends over time. In order to quantify the total between-years variance, we treated year of survey as a series of dummy variables predicting self-esteem. These analyses were conducted separately for males and females at each of the three grades. The six *R*-squared values ranged from .0008 to .0025, indicating no more than one quarter of one percent of variance between years. We also examined year of survey treated as a linear predictor; the largest *R*-squared value for a linear trend was .0008.

The linear coefficients did, however, show small but statistically significant increases in self-esteem among females in all three grades; these amounted to about .005 per year among 8th and 10th graders, and about half that much among 12th graders. To put this more concretely, we averaged self-esteem scores for 1991, 1992, and 1993, and compared them with averages for 2006, 2007, and 2008.[5] Among 8th-grade females, mean self-esteem

[3]As noted earlier, cases with missing data on any item are excluded.

[4]This practice of intermixing items from different scales is not at all unusual. On the contrary, as was pointed out in a recent discussion of questionnaire format issues, “Usually, items belonging to different scales are arranged in random order within a questionnaire, or the items from one scale are placed with the largest possible distance to each other” in order to make measurement purposes less transparent and to avoid monotonous item orderings that might reduce respondents’ attention and motivation (Sparfeldt, Schilling, Rost, & Thiel, 2006, p. 962). In the case of MTF questionnaires, reducing monotony and maintaining respondent motivation were primary considerations prompting the intermixing of items.

scores rose from 3.88 to 3.96, an increase of 9% of a standard deviation—that is, Cohen's ***d*** score equals .09 (Cohen, 1988). Among females in higher grades, the increases were from 3.90 to 3.97 for 10th graders (***d*** = .07), and from 4.00 to 4.04 for 12th graders (***d*** = .05). Among males the linear changes were mixed—a very small and nonsignificant increase among 8th graders, no clear trend among 10th graders, and a slight (albeit significant) decrease among 12th graders (from 4.12 to 4.08; ***d*** = −.05).

The time trends for 12th-grade males and females, although quite small, do show a convergence from 1991 through 2008—a narrowing of the gender difference averaging .005 per year on the self-esteem scale. Thus, for example, males averaged about 0.12 higher than females in 1991-1993 (***d*** = .15), whereas the difference declined to only about 0.04 in 2006-2008 (***d*** = .05). Given that the gender difference in 1991-1993 was only about 15% of a standard deviation, the convergence, although detectable, could hardly be described as large. Moreover, an examination of 12th-grade data extending back to 1977 did not reveal any earlier convergence in male-female self-esteem; instead, in all years prior to 1991 males scored slightly higher than females, with differences averaging 0.10 (i.e., ***d*** scores of about . 13). This is consistent with previous research on gender differences in self-esteem (Kling et al., 1999; O'Malley & Bachman, 1979).

On balance, we concluded that because 0.25% or less of total variance in self-esteem scores lies between years (0.08% or less if we focus only on linear trends), there was little to be lost by combining data across all 18 annual surveys for the remainder of our analyses—especially given that exploratory analyses revealed no important cohort differences in patterns of findings. In view of the relatively small sizes of some of the racial/ethnic subgroups in any given year, this combining across years offers great advantages in clarity and reliability.

Descriptive Comparison: Subgroup Response Distributions

Figure 1 presents response distributions of self-esteem scores, comparing all four race/ethnicity subgroups separately for males and females in each of the three grades. At first glance these might appear to be cumulative distributions, because they are such a far cry from the typical bell-shaped distribution. But these are, in fact, frequency distributions showing that scores among adolescents in the United States are strongly skewed in the direction of high self-esteem. Consider these examples from the 12th-grade female (lower right-hand) portion of the figure: Fully 45% of African-American females are in the top self-esteem category shown in the figure (i.e., those with the four highest possible self-esteem index scores—4.625, 4.75, 4.875, or 5.0), whereas fewer than 8% score at the mid-point or lower (scores of 1.0 to 3.0—the bottom four categories in Figure 1). Even among Asian-American females, who average lowest in self-esteem index scores, 24% are in the top category and fewer than 14% score at the mid-point or lower.

Clearly in this study, as in most other studies of group differences, the subgroup distributions are more similar than different. However, the figure also shows certain subgroup differences that replicate fairly consistently across genders and grades. In particular, and consistent with Hypothesis 1, African Americans are most likely to score at the top of the self-esteem scale whereas Asian Americans are least likely to do so (with 8th-grade males as the sole exception). These differences are highly statistically significant, as can be seen in the next section when we compare mean scores (including confidence intervals) across subgroups.

[5]These are, in effect, moving averages around the years 1992 and 2007 (done in order to reduce random year-to-year fluctuations). The shifts across this 15-year span are very similar to the linear trend coefficients extrapolated across 15 years.

Finally, Figure 1 shows that the distributions of self-esteem scores, including subgroup differences, are largely similar from modal age 14 (8th grade) through modal age 18 (12th grade). Later in the results section we provide further evidence on age-related differences in self-esteem scores, as well as age-related differences in extreme response tendencies.

Multivariate Prediction of Self-Esteem

A series of multiple regression analyses explored whether race/ethnicity and gender differences in self-esteem were affected by controls for students' grade point averages (GPA), college plans, and parents' education.[6] We employed multiple classification analysis (MCA), a form of dummy variable multiple regression analysis (Andrews, Morgan, Sonquist, & Klem, 1973). In earlier analyses, Bachman and O'Malley concluded "…we find no dimensions which would permit us to 'explain away' the differences between blacks and whites" (1984b, p. 504). The same is true now, this time for findings extending to four different categories of race/ethnicity.

Table 1 presents summary findings from MCA models for each grade. The first model predicts self-esteem scores from grades and college plans, and the second adds parental education as a predictor; these models show the extent to which these education-related variables alone can account for a considerable amount of the variance in self-esteem.[7] The third model adds the eight-category measure of race/ethnicity by gender. We summarize the education-related findings briefly before examining how mean levels of self-esteem differ by race/ethnicity and gender.

Self-Esteem Linked to Educational Success—First, we note that the relations between grades, college plans, parental education and self-esteem are all positive, consistent with Hypothesis 2. Without exception, the eta and beta coefficients are highest for 8th graders and lowest for 12th graders. Table 1 shows that GPA and college plans are both relatively strong correlates of adolescent self-esteem; GPA is the stronger correlate in 8th grade (eta = .29), but grows somewhat weaker by 10th grade (eta = .24) and still weaker by 12th grade (eta = .17). Parental education is a much weaker predictor, and makes only a very modest additional contribution to variance above and beyond the other two measures (an increase in *R*-square of .003 for 8th graders, and only .001 for the older grades).[8] So having good grades, planning for college, and (to a lesser extent) having well-educated parents, all are positively linked with self-esteem; but examination of the coefficients clearly shows that those links grow distinctly weaker as adolescents progress from 8th grade to 12th grade.

These covariates do not attenuate race/ethnic differences in self-esteem, consistent with Hypothesis 3. In fact, the beta coefficients for the race/ethnicity/gender measure are actually larger than the corresponding (bivariate) eta coefficients. In other words, far from explaining away differences in race/ethnicity and gender, taking account of differences in educational background and aspirations actually heightens most race/ethnic/gender differences in self-esteem scores. A comparison of *R*-squared values in Table 1 indicates that the race/ethnicity/gender predictor relates to 2.3-2.9% of the variance in self-esteem scores, when added to an

[6]Initial analyses also controlled region and urban density; however, those dimensions made no appreciable contribution to overall explained variance, so they are not included here. We also explored controls for self-concepts of intelligence and scholastic ability; although they are strongly correlated with self-esteem, as was expected, including them as controls did not substantially affect the race/ethnicity/gender differences.

[7]Although it is common practice in multivariate analyses to categorize some variables as "predictors" and others as "dependent variables" or "outcomes," we have tried to avoid implying causation from these cross-sectional correlational analyses. We add here explicitly that we do not assume single one-way causal connections between self-esteem on the one hand and measures of academic success and commitment (GPA and college plans) on the other.

[8]The eta and beta statistics do not show direction of relationship, so we note here that all three of the control measures are positively correlated with self-esteem. Moreover, the relationships are almost entirely linear (additional analyses with the three control measures constrained to be linear yielded *R* and *R*-squared values virtually unchanged from those in Table 1).

equation including GPA, college plans, and parental education. In contrast, when the race/ethnicity/gender predictor is considered alone, it accounts for only 1.3-1.5% of the total variance in self-esteem (based on squaring the eta coefficients in Table 1).

We now turn to a closer examination of specific subgroup differences, shown in the lower portion of Table 1. It should be noted that the footnote to Table 1 indicates 95% confidence intervals for all subgroups, so as to permit assessments of the likelihood that any subgroup difference could be due to chance.

Self-Esteem Differences Linked to Race/Ethnicity/Gender—White students constitute more than two thirds of the sample at each grade; consequently, mean self-esteem scores for the White students (both unadjusted and adjusted) lie fairly close to the grand mean at each grade. At all three grades, White males are slightly above the grand mean for self-esteem and White females are slightly below. Adjustments for GPA, college plans, and parental education slightly heighten the male-female discrepancy; this is because GPAs and college plans are slightly higher among females, which would be expected to produce slightly higher female self-esteem scores.

Turning next to African-American students, the mean scores in Table 1 are consistent with the differences suggested by Figure 1—African-American students, both males and females, average higher than any other subgroup in self-esteem scores. Moreover, the adjustments for GPA, college plans, and parental education heighten this pattern appreciably for males (roughly 10% of a standard deviation) but scarcely at all for females. At grades 8 and 10 the unadjusted scores for African-American males and females are nearly identical, whereas the adjusted scores are higher for males; however, at grade 12 the unadjusted scores are higher among females, with the adjusted scores nearly identical. It is noteworthy that 12th-grade African-American students are the only race/ethnicity subgroup in which females average significantly higher than males in unadjusted self-esteem scores (i.e., their confidence intervals do not overlap); in every other instance (all subgroups at all grades) males equal or exceed females in average self-esteem, in spite of males' slightly lower GPAs and college plans.

Hispanic students are generally similar to White students in self-esteem scores, although there are some differences (and, given the large sample sizes, many differences reach statistical significance; see the small confidence intervals in Table 1 footnote). The findings for Hispanic students differ somewhat by grade, perhaps influenced by their higher than average dropout rates between the end of 8th grade and the end of 10th grade. In 8th grade, Hispanic students average slightly lower than White students in unadjusted self-esteem scores; however, after adjustments taking account of Hispanic students' lower GPAs and college plans, and substantially lower parental education, the 8th-grade self-esteem differences disappear. In 10th and 12th grades, Hispanic males average slightly lower than White males in unadjusted self-esteem scores, but slightly higher after adjustment for GPA, college plans, and parental education. Among females in 10th and 12th grades, Hispanic students are just about equivalent to White students in self-esteem scores before adjustment, but after adjustments the Hispanic females score higher.

Asian-American students report the highest average GPAs, college aspirations, and parental education. Because these factors all contribute to high self-esteem, one might reasonably expect that Asian-American students would have relatively high self-esteem scores. In fact, however, they do not. We saw earlier, in Figure 1, that Asian-American students are the least likely to have top self-esteem scores—although most Asian-American students score at least above the midpoint on the self-esteem scale. The mean scores in Table 1 tell a similar story: Asian-American females have the lowest mean self-esteem scores of any subgroup,

and Asian-American males generally score lower than other males. These differences grow larger as students progress from 8th to 10th and then 12th grade. Of course, when GPA, college plans, and parental education are taken into account, the adjusted self-esteem scores for Asian-Americans are even lower, especially among females.

In sum, the multivariate analyses show that controlling for GPA, college plans, and parental education enhances rather than eliminates racial/ethnic differences in self-esteem. African-American self-esteem scores, already highest among the subgroups, are even higher after controls. Asian-American scores, already lowest, become still lower. Only in comparisons between Whites and Hispanics does the multivariate adjustment tend to reduce (or reverse) the initially small differences in self-esteem scores. On the whole, then, these multivariate findings are consistent with Hypothesis 3. As for gender differences, within all four racial/ethnic subgroups at all three grades, the females average slightly higher in GPAs and college expectations compared with males; nevertheless, in nearly all instances the females do not rate themselves as highly as males in the self-esteem items. So the multivariate analyses consistently adjust female self-esteem scores downward when compared with males. These findings on gender differences are all consistent with Hypothesis 4. Finally, it should be kept in mind that although the race/ethnicity/gender differences are significant and fairly consistent across grades, an adolescent's self-esteem appears to be more strongly associated with GPA and college plans than with race/ethnicity or gender.

Extreme Responding and Self-Esteem Scores

Bachman and O'Malley (1984a) reported that collapsing the response scale for self-esteem items tended to reduce or eliminate African-American-White differences in self-esteem scores, because it largely cancelled out racial differences in extreme responding—that is, the greater willingness of African-American students to use the extreme ends of Likert response scales. In order to consider that issue again in this expanded analysis of self-esteem, we recomputed the MCAs summarized in Table 1, this time using a collapsed scoring of the self-esteem items. Specifically, we combined "Agree" with "Mostly Agree" scores, and also combined "Disagree" with "Mostly Disagree." The effect of this scoring is to remove the distinction between different strengths of agreement or disagreement; it does not, of course, do anything to take account of possible differences in willingness to use the "Neither" response, but most adolescents make little use of that alternative in responding to the self-esteem items. The results of the MCAs predicting to the collapsed scoring of self-esteem can be noted briefly here (and are available in full detail from the authors on request).

We found that overall patterns of prediction are very similar for the full-scale scoring and the collapsed scoring versions of self-esteem. The collapsed scoring version is just as strongly correlated with GPA, college plans, and parental education as is the full-scale version (multiple- *R* coefficients based on these three predictors are virtually identical across the two scoring versions). When race/ethnicity/gender is added as a predictor, however, its beta coefficients and additional contributions to explained variance are consistently lower, as predicted by Hypothesis 6. This occurs primarily because of reduced differences between African-American and White students, entirely consistent with the earlier findings on African-American-White differences (Bachman & O'Malley, 1984a). Among the other subgroups we found relatively little differential impact of collapsed scoring.

Another approach to self-esteem and extreme responding is to focus on percentages of students who have the highest possible self-esteem scores. We saw earlier that the distribution of self-esteem scores is strongly skewed toward the high end of the scale, with roughly one third of White students, and even more African-American students, in the top category of Figure 1 (which consisted of the four highest scores: 5.0, 4.875, 4.75, and 4.625 on the full-scale self-esteem measure). Now, in Figure 2, the solid bars show percentages of

students who had the highest possible self-esteem score (5.0); these are students who indicated that they agreed (fully, not just "Mostly") with all four of the positively worded items and disagreed (fully) with all four of the negatively worded items. The open bars in Figure 2 show percentages of students with highest possible self-esteem scores using the collapsed scoring method—that is, they gave the positive self-esteem answer to all eight items (with or without using any "Mostly" responses). These two different approaches to highest possible self-esteem scores provide some interesting contrasts, as well as further perspective on the findings already shown.

Focusing first on the solid bars, we see that substantial percentages of students show the highest possible self-esteem scores—most notably about one fifth of African-American males and females in all three grades. Hispanics are also fairly high—about 14% of males and 12% of females at all grades. Among White and Asian-American students, the percentages decline a bit from 8th to 12th grades—from 18% to 14% among White males, from 14% to 10% among White females, from 14% to 9% among Asian-American males, and only a nonsignificant shift from 9% to 8% among Asian-American females. So for some subgroups, at least, the full-scale findings might suggest that the tendency toward very high self-ratings declines with age— although a broader alternative interpretation could be that willingness to use the scale extremes declines with age.

The open bars in Figure 2 provide an interesting contrast, and suggest that when differences due to response styles are constrained, self-esteem appears to increase with age (consistent with Hypothesis 5). Proportions showing highest self-esteem (based on collapsed scoring) rise from 8th to 10th to 12th grade among African-American and Hispanic students, and from 10th to 12th grade among White students. Asian-American students are the only ones not showing increases with age when self-esteem is scored this way.

Discussion

This revisiting of self-esteem provided an opportunity to replicate and extend earlier findings derived from MTF samples of 12th-grade students in 1980-1982. The present findings, based on nationally representative samples of adolescents in the United States extending across 18 years (1991-2008), suggest a number of broad conclusions highlighted (in italics) in the discussion that follows.

The first broad conclusion is that (a) African-American students again show higher self-esteem scores than White students, and (b) these differences in self-esteem scores are diminished *when a collapsed scoring method is used.* This replicates the earlier findings in all important respects; moreover, the new findings extend that conclusion to include 8th- and 10th-grade students.

The present analyses are based on very large samples, thus permitting us to go much further than simply replicating the earlier comparisons of White and African-American high school seniors. The inclusion of 8th and 10th graders provides a sampling of adolescents before most dropping out of high school occurs. We also examined males and females separately across ages and racial/ethnic subgroups. Most important, we extended the subgroup coverage to include Hispanics and Asian Americans. The inclusion of these other subgroups makes possible our second broad conclusion: Hispanic students have slightly lower self-esteem scores than White students, and Asian-American students have the lowest self-esteem scores.

The self-esteem findings also include gender differences, and gender interactions with race/ethnicity. Among White and Asian-American students, and Hispanic students to a lesser extent, self-esteem scores are lower for females than for males; moreover, adjustments for

the higher GPAs and college plans of females actually enhance these gender differences. Among African-American students, the unadjusted scores do not show consistent gender differences, but here again adjustments for GPA and college plans lower female scores compared with those of males.

What should we make of this self-esteem deficit among White, Hispanic, and Asian-American females? Could it simply reflect differences in response styles? Our analyses of collapsed-scale self-esteem scoring suggest not: female scores were still lower than male scores, and this deficit was enhanced after controls for GPA and college plans. These findings suggest a third broad conclusion: Among most adolescents in the United States, with the notable exception of African Americans, females are somewhat less willing than males to provide highly positive *self-evaluations.* (Or, if one prefers, male adolescents are more likely than females to have exalted opinions of themselves!)

In addition to the gender differences in self-evaluation, the findings shown in Figure 2 indicate a fourth broad conclusion: Adolescent self-esteem scores are consistently highest among African Americans and generally lowest among Asian Americans. This is especially true in the later grades and after adjustments for differences in GPA and college plans. The self-esteem comparisons involving Whites and Hispanics are more complicated, and vary depending on scoring method and whether scores are adjusted for differences in academic successes and aspirations.

The major differences by race/ethnicity and gender summarized above replicate fairly closely across time from 1991 to 2008 and across the three grades, representing U.S. adolescents from modal ages 14 to 18. This consistency across time and age groups gives us a high degree of confidence in these findings. As for any differences between 8th, 10th, and 12th graders, the self-esteem scores reported here are roughly equal for 8th and 10th graders, and then increase slightly by 12th grade. The small difference in average self-esteem between 10th and 12th graders may result, in part, from some respondents dropping out of high school during that interval; researchers have consistently found global self-esteem to be somewhat lower than average among adolescents who do poorly in school (e.g., Coopersmith, 1967; Gergen, 1971; Rosenberg, 1965), particularly among those who later drop out (Bachman, Green, & Wirtanen, 1971; Bachman, O'Malley, & Johnston, 1978; Bachman et al., 2008). Also, self-esteem may increase somewhat during adolescence; Bachman et al. (2008, p. 41) report increases between modal ages 14 and 18, based on panel analyses that included high school dropouts, and O'Malley and Bachman (1983) reported increases in self-esteem from age 13 to 23, based on analyses of six large data sets. Likewise, a very small age-related increase in Rosenberg scores from junior high to high school was also evident in the meta-analysis reported by Twenge and Campbell (2001; e.g., $d = .05$ for mixed-sex samples, p. 333). Nonetheless, grade level (8th, 10th, 12th) was not a substantial moderator of the findings reported here. Therefore, our fifth broad conclusion is: *On* balance, the present findings leave us impressed by the similarities (replication) across the three *grades rather than any age-related differences.*

How large and important are the race/ethnicity/gender subgroup differences in self-esteem reported here? First it must be said that in this study, as in most other studies of differences among groups, the overlaps among subgroups are far larger than any differences between them. This is illustrated in Figure 1, and also indicated by the findings in Table 1 (both of which use the original "full-scale" scoring, not the "collapsed" version). The table shows that 1.5% or less of the total variance in self-esteem scores is between-group variance across the eight race/ethnicity/gender categories, but the unique contribution to explained variance rises to as much as 2.9% (for 10th graders) when differences in grade point averages and college plans are taken into account. Although these amounts of between-groups variance

are relatively modest, some differences on specific self-esteem items are not trivial, especially if reported as percentages endorsing an extreme response category. For example, one could look at one item and report that 60% of African-American high school seniors (genders combined) “Agree” with the statement “I take a positive attitude toward myself,” in contrast to only 31% of their White and Asian-American classmates who “Agree” with a such a statement —a 2 to 1 difference. But one could also report that 88% versus 76% *agree or mostly agree* with that statement—still a difference, but not so dramatic. Distinctions such as these are large enough to suggest a continuing caution against the raw reporting of subgroup percentage differences, especially in top or bottom categories of Likert-type questionnaire items.

The differences between subgroups reported here are highly consistent across modal ages 14, 16, and 18, as well as across nearly two decades (1991-2008); given the large sample sizes, many of the differences are statistically significant. But it is also true that the overlaps among groups are far larger than the differences. This finding concerning overlaps is certainly not unique to the present study; indeed, most studies of subgroup differences also find large overlaps. But the fact that it is ubiquitous does not make it unimportant. So while researchers often focus on the differences, in our view it is important not to lose sight of the overlaps— especially when dealing with race/ethnicity matters. Thus our final broad conclusion is this: Although racial/ethnic subgroups of adolescents in the contemporary United States show significant systematic and replicable differences in self-esteem, on the whole the subgroups are *more alike than different.*

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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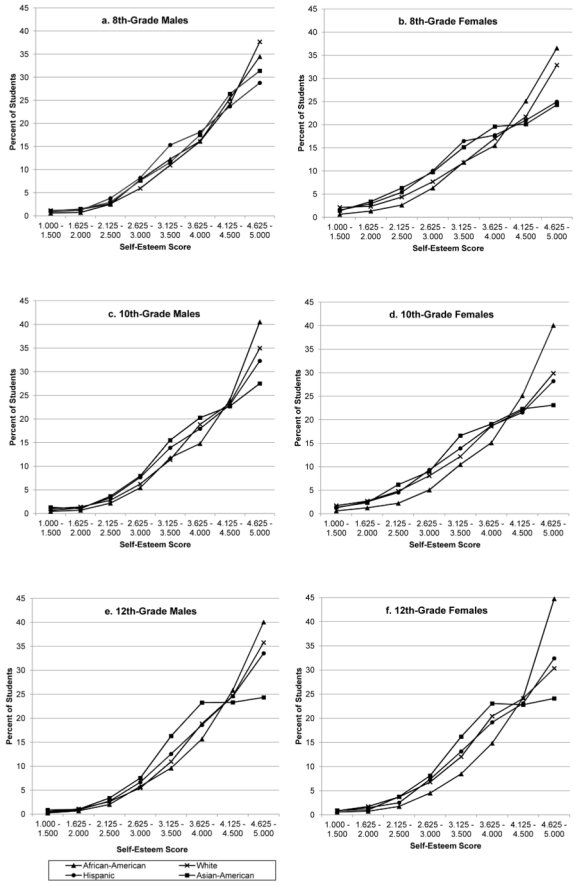

Figure 1.
Frequency distributions of self-esteem index scores by race/ethnicity, gender, and grade, 1991-2008.

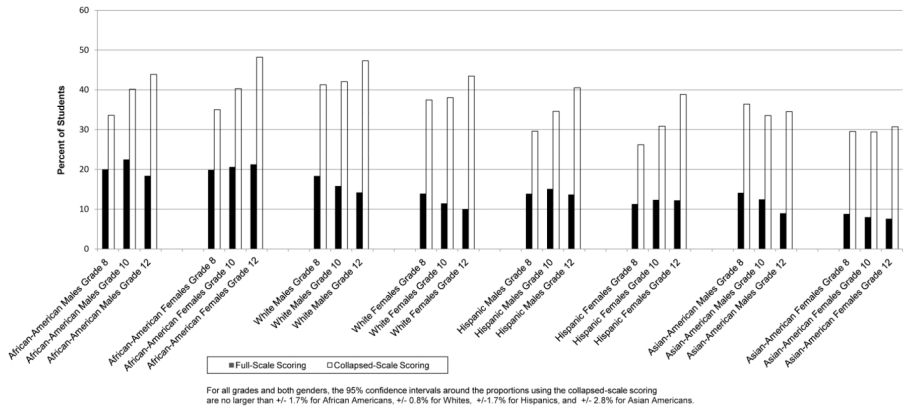

Figure 2.
Students with the highest possible self-esteem scores with full-scale scoring and collapsed-scale scoring by race/ethnicity, gender, and grade, 1991-2008.

Table 1

Self-Esteem Index Scores by Race/Ethnicity, Gender, and Grade, 1991-2008: Regression (MCA) Coefficients and Means, Unadjusted and Adjusted for GPA, College Plans, and Parental Education

	Grade 8 wtd. *N*=102,110		Grade 10 wtd. *N*=107,849		Grade 12 wtd. *N*=107,421	
	Eta	Beta Adjusted for Factors	Eta	Beta Adjusted for Factors	Eta	Beta Adjusted for Factors
GPA	.290	.231	.239	.181	.167	.115
College Plans	.244	.156	.216	.140	.188	.148
R		.324		.271		.217
R^2		.105		.073		.047
GPA	.290	.223	.239	.179	.167	.111
College Plans	.244	.146	.216	.137	.188	.146
Parental Education Index	.149	.053	.102	.026	.085	.031
R		.328		.272		.219
R^2		.108		.074		.048
GPA	.290	.245	.239	.205	.188	.175
College Plans	.244	.157	.216	.148	.167	.115
Parental Education Index	.149	.043	.102	.028	.085	.034
Gender/Race/Ethnicity	.118	.157	.123	.174	.115	.160
R		.362		.321		.269
R^2		.131		.103		.072

Race/Ethnicity and Gender*	Percentage of Sample	Unadjusted Mean Self-Esteem Index Score	Adjusted Mean Self-Esteem Index Score	Percentage of Sample	Unadjusted Mean Self-Esteem Index Score	Adjusted Mean Self-Esteem Index Score	Percentage of Sample	Unadjusted Mean Self-Esteem Index Score	Adjusted Mean Self-Esteem Index Score
African-American Males	5.58	4.143	4.225	5.03	4.231	4.314	4.83	4.229	4.314
African-American Females	7.37	4.154	4.164	6.44	4.213	4.220	6.80	4.286	4.309
White Males	33.54	4.143	4.166	35.46	4.101	4.127	35.52	4.142	4.159
White Females	37.72	3.976	3.921	38.59	3.934	3.879	38.56	4.020	3.976
Hispanic Males	5.46	3.996	4.148	5.06	4.049	4.184	4.73	4.100	4.202

Race/Ethnicity and Gender*	Percentage of Sample	Unadjusted Mean Self-Esteem Index Score	Adjusted Mean Self-Esteem Index Score	Percentage of Sample	Unadjusted Mean Self-Esteem Index Score	Adjusted Mean Self-Esteem Index Score	Percentage of Sample	Unadjusted Mean Self-Esteem Index Score	Adjusted Mean Self-Esteem Index Score
Hispanic Females	6.13	3.834	3.925	5.83	3.920	3.990	5.68	4.047	4.094
Asian-American Males	2.07	4.062	3.947	1.75	3.961	3.885	1.91	3.929	3.900
Asian-American Females	2.12	3.802	3.641	1.84	3.823	3.691	1.96	3.847	3.763
Total Sample (Standard Deviation)	100	4.045 (0.871)	4.045	100	4.030 (0.851)	4.030	100	4.092 (0.785)	4.092

* For all grades and both genders, the 95% confidence intervals around these means are no larger than +/− 0.027 for African-American students, +/− 0.015 for White students, +/− 0.033 for Hispanic students, and +/− 0.057 for Asian-American students.