Beyond Appearance

A New Look at Adolescent Girls

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Over the last 10 years, there have been extensive discussions in media and academic publication outlets regarding the costs of adolescence for females in terms of mental health, self-esteem, and identity. For example, the American Association of University Women (AAUW; 1990) reported marked declines in girls’ self-confidence during the early adolescent years. Similarly, Carol Gilligan (1990) has reported that girls lose confidence in their ability to express their needs and opinions as they move into the early adolescent years; she referred to this process as “losing one’s voice.” Finally, Mary Pipher (1994), in her very popular book Reviving Ophelia, outlined a variety of ways in which young female adolescents lose confidence in themselves and become depressed.

We wish to thank all of our colleagues and former students who have worked with us in developing the studies summarized in this chapter: Diane Early, Elaine Belansky, Karen McCarthy, Arnold Sameroff, Linda Kuhn, Carol Midgley, David Reumen, Allan Wigfield, Janis Jacobs, and Kim Updegraff. This chapter was supported by grants from the National Institute of Mental Health, the National Institute on Child Health and Human Development, the National Science Foundation, and the MacArthur Research Network on Successful Pathways for Adolescents Living in High-Risk Settings.
Although these patterns do exist, evidence from other sources suggests that the developmental changes may not be large or as general as portrayed in the popular media. For example, although Simmons and Blyth (1987) found that girls who made the junior high school transition experienced a dramatic decline in their self-esteem during early adolescence, girls in kindergarten through eighth grade (elementary school) did not experience this decline. Similarly, although the girls in Eccles et al.'s (1989) study had lower levels of self-esteem at all time points than did the boys, the girls' and boys' self-esteem dropped about the same amount following the junior high school transition. Both of these studies suggest that the drop in girls' self-esteem is not universal and often not substantially different from the drop in boys' self-esteem.

In addition, many of the reports of the costs of adolescence for females focus on only one or two aspects of development (e.g., self-esteem, confidence in one's academic abilities, "voice," or depression) and then report only the negative changes, failing to note that many aspects of girls' self-perceptions and mental health do not decline and that the variations within girls, even on those indicators that do show average declines, are much larger than the average differences in the mean levels for girls and boys. For example, Simmons and Blyth (1987) found in their sample far less marked declines among African American girls than among European American girls.

Other researchers, for example Gilligan and her colleagues (e.g., Gilligan, 1990), did not include boys in their samples and yet concluded that the changes in girls' self-perceptions were linked to gender role identity development rather than to a more general process linked to adolescent development in both girls and boys. Like any developmental period, adolescence poses both challenges and opportunities to all young people. Unless one looks at the pattern of change for both girls and boys, one may incorrectly attribute the changes in girls' self-perceptions and mental health to gender-related issues rather than to these more general developmental issues linked to adolescence.

In this chapter, we review changes in both girls' and boys' confidence, ability self-concepts, task values, and self-esteem. We pay particular attention to variations in the pattern of change across (a) different arenas of both girls' and boys' adolescent lives and (b) different female subpopulations in the United States. In addition, we pay particular attention to the work we have been doing on these topics over the past 25 years. During this time, we have investigated developmental changes in domain-specific ability self-concepts, expectations for future success, and values–motivation across several domains significant to adolescents' lives (e.g., math, English, physical science, sports, peer-related social skills, popularity, and physical attractiveness). We also investigated developmental changes in indicators of more general self-esteem. Although we found developmental changes
on many of these indicators, these patterns of change do not consistently favor males. Instead, the patterns of change in our data reflect increasing congruence with gender role stereotypes: With increasing age, the girls come to hold more female gender role stereotypic views of their abilities and interests, and the boys come to hold more male gender role stereotypic views of their abilities and interests. The changes on indicators of mental health reflect a similar pattern: An increasing number of girls reported symptoms of low self-esteem and depression, and an increasing number of boys reported either being victimized or engaging in aggressive and physically risky behaviors. These types of changes suggest that adolescence provides both opportunities and risk for both girls and boys—some of which are linked to gender roles and some to more general processes, which in turn are linked to the types of demands American society places on early adolescent children. It is important to include findings for both girls and boys to distinguish between these two types of influences. We summarize such patterns in the following sections.

COMPETENCE AND EXPECTANCY-RELATED SELF-PERCEPTIONS

As noted earlier, there has been considerable public attention focused on the issue of girls’ declining confidence in their academic abilities. In addition, researchers and policymakers interested in young women’s educational and occupational choices have stressed the potential role that such declining confidences might play in undermining young women’s educational and vocational aspirations, particularly in the technical fields related to math and physical science (Bell, 1989; Betz & Fitzgerald, 1987; Eccles, 1987, 1994; Farmer, 1985; Hollinger, 1983; Kerr, 1985; National Science Foundation, 1996; Updegraff, Eccles, Barber, & O’Brien, 1996). For example, these researchers have suggested that girls may drop out of math and physical science because they lose confidence in their math abilities as they move into and through adolescence—leading to the fact that females are less likely to pursue these types of careers than are males (e.g., Betz & Fitzgerald, 1987; Eccles [Parsons] et al., 1983). Similarly, these researchers have suggested that gender differences in confidence in one’s abilities in other areas underlie gender differences across the board in educational and occupational choices. But even more important for this chapter, Eccles and her colleagues have suggested that the individual differences among females in educational and occupational choices also are related to variations among females in their confidence in their abilities in different domains.

But do females and males differ on measures commonly linked to expectations for success, particularly with regard to their academic subjects and various future occupations? Are females more confident of their abil-
In most but not all studies, the answer to both these questions is yes. For example, both Terman (1926) and Strauss and Subotnik (1991) found that gifted girls were more likely to underestimate their intellectual skills and their relative class standing than were gifted boys—who were more likely to overestimate theirs. Strauss and Subotnik also found that gifted high school girls reported more test anxiety than their gifted male peers. Similarly, girls enrolled in a special gifted elementary school program rated their test anxiety higher than did their male peers (Eccles & Harold, 1992). Gender differences in the competence beliefs of more typical samples also are often reported, particularly in gender role stereotyped domains and on novel tasks. Often these differences favor males. For example, high-achieving females are more likely than their male peers to underestimate both their ability level and their class standing; in contrast, their male peers are more likely than these females to overestimate their likely performance (Crandall, 1969; Frome & Eccles, 1995; Strauss & Subotnik, 1991; Terman, 1926).

In other studies, the difference depends on the gender role stereotyping of the activity. For example, boys hold higher competence beliefs than girls for math and sports, even after all relevant skill-level differences are controlled. In contrast, girls have higher competence beliefs than boys for reading and social skills, and the magnitude of these differences often increases following puberty (e.g., Eccles, 1984; Eccles et al., 1989; Harter, 1982; Huston, 1983; Wigfield, Eccles, Mac Iver, Reuman, & Midgley, 1991). Furthermore, in each of these studies, the young women on average had greater confidence in their abilities in reading and social skills than they did in their abilities in math, physical science, and athletics.

Works By Eccles and Colleagues

We have focused our work directly on both gender differences and individual differences within females in competence-related beliefs. Over the last 15 years, we have conducted three longitudinal studies of the ontogeny of children's and adolescents' ability-related self-perceptions and values in an effort to understand individual differences in achievement-related task choice, engagement, and performance. The role of gender has been one of our primary concerns. Because we present findings from each of these studies throughout this chapter, we now provide a brief summary of each study. The first study, the Michigan Study of Adolescent Life Transitions (MSALT), began in 1982 with a sample of approximately 3,000 sixth graders in 12 different school districts in southeastern Michigan. These districts served primarily European American working-class and middle-class, small city communities. Although the sample is predominantly European American, it does include about 150 African American adolescents. We have now followed approximately 2,000 of these adoles-
cents well into their early adulthood years, using standard survey-type methods. The second study, Childhood and Beyond, began in 1985 with a sample of approximately 800 European American early elementary school children in three middle-class school districts in southeastern Michigan. We have now followed this sample through elementary and secondary school using standard survey-type methods. The third study, Maryland Adolescent Growth in Context (MAGIC), began in 1990 with approximately 1,000 seventh graders attending 23 different junior high schools in one public school district in Maryland. This sample is 65% African American and 30% European American. We are following these adolescents through the end of high school, again using standard survey-type methods.

In each of these studies, we found consistent evidence of gender differences in expectations for success and confidence in one's abilities for mathematics, English, athletics, and peer-related social skills, especially among junior and senior high school students (e.g., Eccles, 1984, 1989; Eccles & Harold, 1991; Eccles et al., 1989; Eccles [Parsons], Adler, & Meece, 1984; Wigfield et al., 1991). However, the direction of the difference depends on the gender typing of the domain, and the differences are always quite small. For example, during the first four waves of data collection in the MSALT (when the adolescents were in the sixth and seventh grades), boys rated their math and sports ability higher than did the girls; in contrast, the girls rated their English and social abilities higher than did the boys (Wigfield et al., 1991).

But even more important for this chapter, female and male adolescents rank ordered these skill areas differently. The girls rated themselves as most competent in English and social activities and as least competent in sports. The boys rated themselves as most competent, by a substantial margin, in sports, followed by math and then social activities; the boys rated themselves as least competent in English. Such within-sex, rank order comparisons are critically important for understanding differences in life choices. In our follow-up studies of these same adolescents, we were able to predict individual differences among the young women in their occupational goals with the pattern of their confidences across subject domains (Jozefowicz, Barber, & Eccles, 1993). The young women who wanted to go into occupations requiring a lot of writing, for example, had high confidence in their artistic and writing abilities and relatively lower confidence in their math and science abilities. In contrast, the young women who wanted to go into science and advanced health-related fields (e.g., a physician) had very high confidence in their math and science abilities.

We asked about these same academic self-concepts as these adolescents moved through high school. Figure 3.1 illustrates the findings for math, English, and sports. One can see the association of gender stereotypes and the developmental patterns in these adolescents' responses. Somewhat contrary to the media portrayal of the gender differences related to mathe-
matics, the size of this sample's gender difference for math is much smaller than the gender difference, favoring females, in these adolescents' ratings of their English ability. Furthermore, the gender difference for math is the largest in Grade 12—exactly the time when high-performing girls begin to drop out of challenging high school math courses (Updegraff et al., 1996). Most striking about this figure is the extent to which boys' confidence in their athletic ability exceeds their confidence in their academic abilities. When one averages across math and English, boys have lower confidence than do girls in their academic abilities in general. This could be one explanation for the fact that the boys in this sample—as in the nation more generally—are more likely to drop out of high school than are the girls.

Given the media attention to the girls' supposed lack of confidence in their math skills, it is important to note that our findings are not anomalous. Mathematics has never been one of the most strongly gender role stereotyped subject areas. For example, in her early work, Aletha Stein
(aka Huston) found that girls and boys rated math as neither especially feminine nor masculine (see Huston, 1983). Furthermore, the proportion of bachelor's degree awarded to women in mathematics in the United States has matched the proportion of women enrolled in college since 1950. Instead, physics and engineering are seen as male-typed subject areas, and many college students enrolled in college math courses are actually majoring in these other fields. In addition, the gender difference favoring males for physical science and engineering is much greater than the gender difference favoring older male adolescents for mathematics (National Science Foundation, 1996).

Ability Self-Concepts

One of the most interesting findings from the studies of academic self-confidence is that the gender differences in self-perceptions are usually much larger than one would expect, given objective measures of actual performance and competence. First, consider mathematics: With the exception of performance on the most anxiety-provoking standardized test, girls do as well as boys on all measures of math competence throughout primary, secondary, and tertiary education. Furthermore, the few gender differences that do exist have been decreasing in magnitude over the last 20 years and do not appear with great regularity until late in the primary school years (National Science Foundation, 1996). Similarly, the gender difference in perceived sports competence is much larger (accounting for 9% of the variance in one study; see Eccles & Harold, 1991) than the gender difference in the measures of actual sport-related skills (which accounted for between 1% and 3% of the variance on these indicators).

Causal Attributions and Locus of Control

So why do girls rate their math and sports competence so much lower than boys and so much lower than they rate their English ability and social skills? Some theorists have suggested that girls and boys may interpret variations in their performance in various academic subjects and leisure activities in a gender role stereotyped manner. For example, girls might be more likely to attribute their math and sports successes to hard work and effort than would boys; in contrast, boys might be more likely than girls to attribute their successes to natural talent. Similarly, girls more so than boys might be more likely to attribute their English and social successes to natural ability and their math and sports successes to hard work and luck (and vice versa for boys). Such differences in interpretation would lead to both the gender differences and the within-gender differences in confidence levels reported above. Unfortunately, there is very little research on the within-gender differences in attributional patterns across domains. More
empirical work has been conducted on gender differences; although the empirical evidence of such gender differences in interpretative style is mixed, the general patterns are worth considering.

Some researchers (e.g., Dweck & Licht, 1980; Stipek & Hoffman, 1980) have found that girls are less likely than boys to attribute success to ability and more likely to attribute failure to a lack of ability. Others have found that this pattern depends on the kind of task used, occurring more with unfamiliar tasks or stereotypically masculine achievement task (see Eccles [Parsons] et al., 1984; Eccles [Parsons] et al., 1983; Yee & Eccles, 1988). The most consistent difference occurs for attributions of success to ability versus effort: Girls are less likely than boys to stress the relevance of their own ability as a cause of their successes. Instead, girls tend to rate effort and hard work as a more important determinant of their success than ability; it is interesting to note that so do their parents (Yee & Eccles, 1988). There is nothing inherently wrong with attributing one's successes to hard work. In fact, Stevenson and his colleagues (e.g., Stevenson, Chen, & Uttal, 1990) stressed that this attributional pattern is a major advantage Japanese students have over American students. Nonetheless, it appears that within the United States, this attributional pattern undermines students' confidence in their ability to master increasingly more difficult material—perhaps leading girls to stop taking math courses prematurely (Eccles, 1994).

Both gender and age differences favoring males are also sometimes reported in the locus of control literature. For example, in Crandall, Katkovsky, and Crandall's (1965) study using the Individual Achievement Responsibility Scale, girls had higher internal locus of responsibility scores than did boys for both positive and negative events. But even more important, high school girls had higher internality for negative events than did younger girls; this developmental difference resulted in the older girls accepting more blame for negative events than both the older boys and the younger girls—a pattern consistent with earlier reports of declining confidence among girls in their academic abilities during the adolescent years (see also Dweck & Licht, 1980; Dweck & Repucci, 1973).

This greater propensity for older adolescent girls to take personal responsibility for their failures, coupled with their more frequent attribution of failure to a lack of ability (a stable, uncontrollable cause), has been interpreted as evidence of greater learned helplessness in females (see Dweck & Licht, 1980). However, evidence for gender differences on behavioral indicators of learned helplessness is quite weak (see Eccles [Parsons] et al., 1984). In fact, in most studies of academic underachievers, boys outnumber girls 2 to 1 (see McCall, Evahn, & Kratzer, 1992). Similarly, boys are more likely than girls to be referred by their teachers for motivational problems and are more likely to drop out before completing high school (Eccles, Wigfield, & Schiefele, 1998). Instead, the evidence is
stronger that females, compared with males, select easier laboratory tasks, are more likely to avoid challenging and competitive situations, lower their expectations more following failure, shift more quickly to a different college major when their grades begin to drop, and perform more poorly than they are capable of on difficult, timed tests (see Dweck & Licht, 1980; Parsons & Ruble, 1977; Ruble & Martin, 1997; Spencer & Steele, 1995). In addition, the age differences on these types of indicators of confidence support the hypothesis that females on average lose confidence in their academic abilities during the adolescent years.

Gendered Stereotypes

Furthermore, the extent to which female adolescents endorse the cultural stereotypes regarding which sex is likely to be most talented in each domain predicts the extent to which girls distort their ability self-concepts and expectations in the gender stereotypic direction (Early, Belansky, & Eccles, 1992; Eccles & Harold, 1991). Spencer and Steele (1995) suggested a related mechanism linking culturally gendered stereotypes to competence: stereotype vulnerability. They hypothesized that members of social groups (e.g., females) who are stereotyped as being less competent in a particular subject area (e.g., math) will become anxious when asked to do difficult problems because they are afraid the stereotype may be true of them. This vulnerability is also likely to increase girls' vulnerability to failure feedback on male-stereotyped tasks, leading to a lowering of their expectations and their confidence in their ability to succeed for these types of tasks. To test these hypotheses, Spencer and Steele gave college students a difficult math test under two conditions: being told that males typically do better on this test or that males and females typically do about the same. The women scored lower than the males only in the first condition. Furthermore, the manipulation's effect was mediated by variations across condition in reported anxiety. Apparently, knowing that one is taking a test on which males typically do better than females increases young women's anxiety, which in turn undermines their performance. This study also suggests that changing this dynamic is relatively easy if one can change the women's perception of the test's sex typing.

Anxiety

Gender differences have also emerged fairly regularly in other studies of anxiety (e.g., Douglas & Rice, 1979; Hill & Sarason, 1966; Manley & Rosenmier, 1972; Meece, Wigfield, & Eccles, 1990). However, Hill and Sarason (1966) suggested that boys may be more defensive than girls about admitting anxiety on questionnaires. In support of this suggestion, Lord, Eccles, and McCarthy (1994) found that test anxiety was a more significant
predictor of poor adjustment to junior high school for boys, even though the girls reported higher mean levels of anxiety. Thus, even though the girls reported higher levels of test anxiety, the negative consequences of test anxiety seemed much more marked for girls. As reported later, concerns about their physical appearance emerged as a much more salient and detrimental anxiety among the girls.

Summary

In summary, when either gender differences or within-gender individual differences emerge on competence-related measures for academic subjects and other important skill areas, they are consistent with gender role stereotypes. These differences have also been found to be important mediators of both gender differences and within-gender individual differences in various types of achievement-related behaviors and choices. Such gendered patterns are theoretically important because they point to the power of gender role socialization processes as the key to understanding both girls' and boys' confidence in their various abilities (see Eccles, Jacobs, et al., 1993; Huston, 1983; and Ruble & Martin, 1997, for a full discussion of these processes). In addition, to the extent that gender role socialization is key, it is important to study how and why females differ in the extent to which they either are exposed to these socialization pressures or resist them when they are so exposed.

It should be noted, however, that gendered patterns do not occur in all studies. For example, in several studies of gifted adolescents, researchers found no gender differences on measures of general self-concept, locus of control, general self-confidence and assertiveness, and general self-esteem (Dauber & Benbow, 1990; Tidwell, 1980; Tomlinson-Keasey & Smith-Winberry, 1983). Furthermore, although the girls in our study of gifted elementary school children reported higher estimates for their reading ability than did the boys, the boys and girls reported equivalent confidence in their mathematical ability (Eccles & Harold, 1992). Similarly, Benbow and Stanley (1982) found no substantial gender difference in gifted students' estimates of their math and science competence. Although the gifted students in the Terman (1926) study did prefer courses that they thought were easier for them, the boys and girls did not differ in their perceptions of the ease of mathematics. Schunk and Lilly (1982) also found no gender difference in gifted children's expectations for success on a laboratory math task. Finally, in our longitudinal study of intellectually capable students, gender differences in expectations for success in future math courses did not mediate the gender differences in math course enrollment; the perceived value of the math course did (Eccles [Parsons] et al., 1984). Furthermore, in all of our studies, the individual differences among the young
women in both confidence and task values were very powerful predictors of individual differences in educational and occupational choices.

It should also be noted that most of the studies documenting the stereotypic gender differences relied exclusively on European American, middle-class samples. We know very little about the generalizability of these findings to other populations both within the United States and across the world. As we discuss later, this is a major problem because evidence for the debilitating effects of gender stereotypic biases on females is much weaker in the few studies of African Americans (see the later discussion for more details).

Given this mixed set of results for intellectually able and gifted adolescents and the limited range of populations studied, it is not clear that girls in general are less confident than boys either of their intellectual abilities in general or of their mathematical ability in particular. Although the differences when they are found do support this conclusion, these differences are always small and often not found. It is also not clear whether this difference, even when it is found, is the primary mediator of gender differences in the educational and occupational decisions. Gender differences in task value may be just as important. These differences are discussed in a later section.

But even more important, in all of the relevant studies researchers have documented extensive variation within each sex. Females vary a great deal among themselves in their intellectual confidence for various academic domains. They also vary considerably in their test anxiety, attributional styles, and locus of control. Variation on these characteristics predict variation in females’ educational and occupational choices (Betz & Fitzgerald, 1987; Eccles, 1987; Eccles, Barber, & Jozekowicz, 1998; Farmer, 1985; Kerr, 1985): Female adolescents who aspire to careers in math and science and take advanced courses in math and physical science have greater confidence in their math and science abilities than those that do not. They also have just as much, if not more, confidence in their math and science abilities as they do in their English abilities.

**Occupational Ability Self-Concepts**

We extended the work on academic, social, and athletic self-concepts by looking at adolescents’ competence ratings for skills more directly linked to adult occupational choice. As the MSALT sample moved into and through high school, we asked them a series of questions directly related to future job choices. First, we asked them to rate how good they were compared with other students at each of several job-related skills. Second, we asked them to rate the probability that they would succeed at each of a series of standard careers. The results for their responses when they were seniors are summarized in Table 3.1. On the one hand, the results are quite...
TABLE 3.1
Gender Differences in Values, Expectations, and Perceived Ability

<table>
<thead>
<tr>
<th>Measure</th>
<th>Females</th>
<th></th>
<th>Males</th>
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<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Expected efficacy in jobs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Health related</td>
<td>4.2</td>
<td>1.9</td>
<td>3.7</td>
<td>1.7*</td>
</tr>
<tr>
<td>2. Science related</td>
<td>3.5</td>
<td>1.6</td>
<td>4.1</td>
<td>1.7*</td>
</tr>
<tr>
<td>3. Skilled labor (male)/protection services</td>
<td>2.4</td>
<td>1.0</td>
<td>4.2</td>
<td>1.2*</td>
</tr>
<tr>
<td>4. Skilled labor (female)/human services</td>
<td>4.5</td>
<td>1.2</td>
<td>3.3</td>
<td>1.2*</td>
</tr>
<tr>
<td>5. Business and law</td>
<td>4.6</td>
<td>1.4</td>
<td>4.9</td>
<td>1.4</td>
</tr>
<tr>
<td>6. Artist</td>
<td>3.5</td>
<td>1.9</td>
<td>3.3</td>
<td>1.7</td>
</tr>
<tr>
<td>Self-perception of skills</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Working with others</td>
<td>5.5</td>
<td>0.9</td>
<td>4.8</td>
<td>1.0*</td>
</tr>
<tr>
<td>2. Leadership</td>
<td>5.3</td>
<td>1.1</td>
<td>5.3</td>
<td>1.0</td>
</tr>
<tr>
<td>3. Independence</td>
<td>5.2</td>
<td>1.1</td>
<td>5.3</td>
<td>1.0</td>
</tr>
<tr>
<td>4. Intellectual</td>
<td>5.1</td>
<td>1.2</td>
<td>5.3</td>
<td>1.0</td>
</tr>
<tr>
<td>5. Mechanical</td>
<td>2.3</td>
<td>1.4</td>
<td>4.2</td>
<td>1.7*</td>
</tr>
<tr>
<td>6. Computers</td>
<td>4.0</td>
<td>1.7</td>
<td>4.2</td>
<td>1.6</td>
</tr>
<tr>
<td>Lifestyle values</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. High status/competitive</td>
<td>4.4</td>
<td>1.4</td>
<td>4.8</td>
<td>1.4*</td>
</tr>
<tr>
<td>2. Risk taking</td>
<td>4.7</td>
<td>1.1</td>
<td>5.1</td>
<td>1.0*</td>
</tr>
<tr>
<td>3. Careerism</td>
<td>5.7</td>
<td>1.0</td>
<td>5.5</td>
<td>1.0</td>
</tr>
<tr>
<td>4. Family and friends before work</td>
<td>4.5</td>
<td>1.0</td>
<td>4.0</td>
<td>1.1*</td>
</tr>
<tr>
<td>5. Material wealth</td>
<td>4.7</td>
<td>1.2</td>
<td>5.1</td>
<td>1.1</td>
</tr>
<tr>
<td>Valued job characteristics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Flexibility to meet family obligations</td>
<td>5.5</td>
<td>1.1</td>
<td>5.4</td>
<td>1.0</td>
</tr>
<tr>
<td>2. People/society oriented</td>
<td>5.7</td>
<td>1.0</td>
<td>5.1</td>
<td>1.1*</td>
</tr>
<tr>
<td>3. Prestige/responsibility</td>
<td>5.4</td>
<td>1.1</td>
<td>5.6</td>
<td>0.9</td>
</tr>
<tr>
<td>4. Creative/educational</td>
<td>5.7</td>
<td>1.2</td>
<td>5.8</td>
<td>1.1</td>
</tr>
<tr>
<td>5. Machinery/manual work</td>
<td>3.0</td>
<td>1.2</td>
<td>3.9</td>
<td>1.6*</td>
</tr>
<tr>
<td>6. Math/computer work</td>
<td>3.9</td>
<td>1.5</td>
<td>4.2</td>
<td>1.5*</td>
</tr>
</tbody>
</table>

Note. Both multivariate analyses of variance (MANOVAs) were significant at the p < .001 level. Significant relationships in the table are based on univariate tests of significance.

*First MANOVA set. Second MANOVA set.

Gender role stereotyped: The female students were less confident of success than were the male students in science-related professions and in male-typed skilled labor occupations. In contrast, the male students were less confident of their success than were the female students in health-related professions and female-typed skilled labor occupations (Jozefowicz et al., 1993). On the other hand, there were no gender differences in these seniors’ ratings of either their confidence of success in business and law or their leadership, independence, intellectual, and computer skills. Furthermore, although the male students were more confident of success in physical science and engineering fields, the female students were more confident than the males of success in health-related fields, which involve extensive scientific training.

The within-gender patterns are equally interesting. On average, these young women saw themselves as quite competent in traditionally female-
typed jobs and skills related to human service, particularly in comparison to their confidence for science-related jobs and mechanical skills. It is interesting to note that these young women also saw themselves as quite competent in terms of leadership, intellectual skills, and independence.

Clearly, these young women see themselves as quite efficacious in terms of possible occupational pathways. Which particular pathway they select or end up on likely has as much, if not more, to do with their values as their sense of efficacy. In the next section, we review the gendered findings related to achievement-related values.

GENDER AND ACHIEVEMENT VALUES

Do females and males make gender role stereotypic life choices because they have gender role stereotypic values? We addressed this question in each of our studies, and the answer is yes. Gender role stereotypic patterns in adolescents' valuing of sports, social activities, and English emerged consistently in our studies (e.g., Eccles et al., 1989; Wigfield et al., 1991). It is interesting to note that the gendered pattern associated with the value of math does not emerge until high school (Eccles, 1984). Finally, the gendered pattern of valuing math and computer skills emerged as the key predictors of both gender differences and individual differences among female students in their plans to enter math-related scientific and engineering fields (Eccles, Barber, & Jozefowicz, 1998; Jozefowicz et al., 1993).

We also found clear evidence of gendered patterns of task value for various school subjects and activities in our study of elementary school children (see Eccles & Harold, 1992; Eccles, Wigfield, et al., 1993; Wigfield et al., 1997). Although there was no gender difference in expectations for success in mathematics, these girls reported liking both math and sports less than the boys did. In contrast, the girls reported liking reading and social activities more than the boys did. Finally, the girls reported liking reading and social activities more than athletic activities. Math fell in the middle and had very high variability. A substantial portion of the girls liked math better than reading; however, an equally substantial portion of the girls liked math much less than reading.

Other studies yielded similar findings. When asked to name their favorite school subjects, gifted girls rated English, foreign languages, composition, music, and drama higher than physical sciences, physical training, and U.S. history (George & Denham, 1976; Terman, 1926). Once again, math yielded a variable pattern among the girls, and there was little evidence of gender differences in interest in mathematics. In contrast, evidence for both stereotypic gender differences in interest in physics and applied mathematical fields, like engineering, and the relatively low rating of interest in these fields compared with other subject areas by girls was

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quite consistent (Benbow, 1988; Benbow & Minor, 1986). Similarly, when asked their occupational interests and anticipated college major, gifted girls rated domestic, secretarial, artistic, biological science, and both medical and social service occupations and training higher than both higher status and business-related occupations in general and physical sciences, engineering, and the military in particular; boys showed the opposite pattern (Fox, Pasternak, & Peiser, 1976; Terman, 1926). Finally, when gifted males and females were asked their leisure time activities and hobbies, similar gendered patterns of interest emerge. At all ages, gifted females both liked and reported spending more time on reading, writing, and participating in a variety of activities related to arts and crafts, domestic skills, and drama than on sports, working with machines and tools, and involved with scientific, math-related, and electronic hobbies. Males showed the opposite pattern (Dauber & Benbow, 1990; Fox, 1976; McGinn, 1976; Terman, 1926; Terman & Oden, 1947).

It is important to note that these gendered patterns have decreased over time. Young women today are more likely to aspire to the male-stereotyped fields of medicine, law, and business than their mothers and grandmothers. Although the numbers are not nearly as large, young women today are also much more likely to seek out occupations related to engineering and physical science (National Science Foundation, 1996). Young women today are also much more involved in athletic activities than their mothers and grandmothers (see Eccles & Harold, 1991).

Because of our interest in understanding career choice, we extended this work in MSALT to include a series of measures of more general life and occupational values. When they were seniors, we asked the participants to rate how important each of a series of job-related and life-related values and of job characteristics were to them. The results are summarized in Table 3.1. As was true for the job-related skills, we found evidence of gender role stereotypic differences and transcendence. In keeping with traditional stereotypes, the female students rated family and friends as more important to them than did the male students; the female students also were more likely than the male students to want jobs that were people oriented. In contrast but also consistent with traditional stereotypes, the male students placed a higher value on high-risk and competitive activities and wealth; they also were more interested in jobs that allowed for work with machinery, math, or computers. However, counter to traditional stereotypes, there were no gender differences in careerism (focus on career as a critical part of one's identity), and the female and male students were equally likely to want jobs that allowed them flexibility to meet family obligations, entailed prestige and responsibility, and provided opportunities for creative and intellectual work.

Evidence of both gender role typing and transcendence was also evident in the within-gender patterns. Although these young women still,
on average, attached most importance to having a job with sufficient flexibility to meet family obligations and with the opportunity to help people, they also placed great importance on the role of their career for personal identity (careerism) and on both prestige--responsibility and creativity as key components of their future occupations.

We next used the values and ability self-concepts to predict these young women's occupational aspirations. The results for the ability self-concepts were summarized earlier. As predicted by the expectancy-value model of achievement-related choices (see Eccles, 1994; and Eccles [Parsons] et al., 1983), the lifestyle and valued job characteristics did an excellent job of discriminating between these young women's occupational plans. Perhaps most interesting was the value placed on helping other people that predicted which women aspired to advanced level health-related professions (e.g., a physician) and which women aspired to PhD-level science careers. Both of these groups of women had very high confidence in their math and science abilities. In contrast, they differed dramatically in the value they placed on helping others: The women aspiring to the health-related fields placed more importance on this dimension than any other value dimension. In contrast, the women aspiring to PhD-level science careers placed less importance on this dimension than any other dimension, particularly the value of being able to work with math and computers (Jozefowicz et al., 1993).

In summary, there is still strong evidence of gendered patterns in the valuing of different academic subject areas and activities. Although it is encouraging that girls value math during elementary school, the fact that adolescent girls have less positive views of both their math ability and the value of math is problematic because these differences lead girls to be less likely than boys to take optional advanced-level math courses and physical science (see Eccles, 1987, 1994; and Eccles [Parsons] et al., 1984).

Psychological Processes Related to These Gendered Patterns

Gendered patterns of responses have also been found on many of the psychological processes proposed by Eccles and her colleagues to underlie these differences in values. For example, Eccles [Parsons] et al. (1983) predicted that the attainment value of particular tasks would be linked to (a) conceptions of one's personality and capabilities, (b) long-range goals and plans, (c) schema regarding the proper roles of men and women, (d) instrumental and terminal values (Rokeach, 1973), (e) ideal images of what one should be like, and (f) social scripts regarding proper behavior in a variety of situations. If gender role socialization leads males and females to differ on these core self- and role-related beliefs, then related activities will have differential value for males and females. Similarly, young women who hold traditional gender role stereotyped beliefs and values should be more
likely than other young women to aspire to female-stereotyped occupations and life roles. For example, in a study of the link between personal values and college major, Dunteman, Wisenbaker, and Taylor (1978) identified two sets of values that both predicted major and differentiated the sexes: The first set (labeled thing orientation) reflected an interest in manipulating objects and understanding the physical world; the second set (labeled person orientation) reflected an interest in understanding human social interaction and a concern with helping people. Students with high thing orientation and low person orientation were more likely than other students to select a math or science major. Not surprising, female students were more likely than male students to major in something other than math or science because of their higher person-oriented values. Similarly, the young women in Jozefowicz, Eccles, and Barber’s (1993) study placed more value than the young men on a variety of career-related skills and interests, such as doing work that directly helps people and meshes well with child-rearing responsibilities. As noted earlier, these values along with ability self-concepts predicted the career plans of both males and females.

Finally, the role of conflict between gender roles and achievement in gifted girls’ lives is well illustrated by an ethnographic study of a group of gifted elementary school girls by Bell (1989). She interviewed a multiethnic group of third- to sixth-grade gifted girls in an urban elementary school regarding the barriers they perceived to their personal achievement in school. Five gender role-related themes emerged with great regularity: (a) concern about hurting someone else’s feeling by winning in achievement contests, (b) concern about seeming to be a braggart if one expressed pride in one’s accomplishments, (c) concern over the reaction to nonsuccess experiences (apparently not being the very best is very painful to these girls), (d) concern over their physical appearance and what it takes to be beautiful, and (e) concern with being overly aggressive in terms of getting the teacher’s attention. In each case, the gifted girls felt caught between doing their best and either appearing feminine or doing the caring thing.

Disidentification

Drawing on the writings of William James (1892/1963), we suggest that adolescents will lower the value they attach to particular activities or subject areas if they lack confidence in these areas to maintain their self-esteem (see also Harter, 1990). Spencer and Steele (1995) suggested a similar phenomenon related to stereotype vulnerability. They hypothesized that women will disidentify with those subject areas in which women are stereotyped as less competent than men. By disidentifying with these areas, women will not only lower the value they attach to these subject areas, but they will also be less likely to experience pride and positive affect when they are doing well in these subjects. Consequently, these subjects will
become irrelevant to their self-esteem. Although these hypotheses remain to be tested directly, our findings are certainly consistent with them. In the next section, we discuss self-esteem in more detail.

**SELF-ESTEEM**

An AAUW (1990) report concludes that girls' self-esteem falls dramatically during early adolescence. Similar findings have emerged in several studies (e.g., Gilligan, 1990; Orenstein, 1994; Pipher, 1994). For example, Simmons and Blyth (1987) found that girls' self-esteem is more likely than boys' to drop between sixth and seventh grade. But this was only true for European American early adolescents who made a transition from elementary school to junior high school at the same time that they moved from sixth to seventh grade, suggesting that both school structure and ethnic culture play an important role in this developmental change. Drawing on cumulative stress theory, Simmons and Blyth suggested that gender differences in the rate of decline in self-esteem among European American adolescents result from the fact that girls making the transition to junior high school at the end of Grade 6 are more likely than boys to be coping with two major transitions (both pubertal and school changes) at the same time. Because coping with multiple transitions is more difficult than coping with only one, these young women should be at greater risk of negative outcomes than adolescents who have to cope with only one transition (either school or pubertal changes) during this developmental period. As seen later, the fact that this effect emerged only among European American adolescents suggests that pubertal changes may be more stressful for European American girls than for African American girls.

Our own data from MSALT yield a similar junior high school transition effect. However, in our study, the unadjusted mean levels of boys' and girls' self-esteem dropped at about the same rate. Nonetheless, the boys had higher self-esteem than did the girls in both sixth and seventh grade, and this gender difference increased in magnitude as these adolescents moved through junior high school and into high school.

Thus, across these three studies, there is clear evidence of lower self-esteem in girls, as compared with boys, during adolescence. Furthermore, there is fairly consistent evidence that this gender difference increases in some populations during this developmental period primarily because the girls' self-esteem drops to a greater extent than does the boys'.

In the next section, we explore some possible reasons for this drop in some girls' self-esteem. We begin with a brief summary of our findings regarding race differences in self-concepts and self-esteem because this work makes clear how variable the magnitude of this decline is across different groups of female adolescents.

**SELF-EVALUATIONS OF COMPETENCE**
We compared African American and European American girls' self-perceptions in both our MSALT and MAGIC study. First, in both studies, the general pattern of gender differences was much weaker, if significant at all, among the African American girls. Second, the African American girls had higher self-esteem than both the European American girls and the African American boys. Third, significant race differences in these girls' self-perceptions could explain the race differences in their self-esteem: African American girls had either similar or higher academic ability self-concepts than European American girls. African American girls also had higher athletic and social self-concepts and were more satisfied with their physical attractiveness (Winston, Eccles, & Senior, 1997). For example, in the MSALT, the African American students rated themselves higher than did European American students with regard to math ability ($F = 24.16, p < .001$), English ability ($F = 26.05, p < .001$), sports ability ($F = 45.35, p < .001$), and peer–social relations ($F = 54.36, p < .001$). Finally, unlike the evidence for European American girls, there was no evidence of a decline in African American girls' self-esteem during the early adolescent years. Similar comparative studies on other ethnic groups are badly needed.

**Predicting Self-Esteem**

Neither the processes underlying individual differences nor the processes underlying developmental changes in self-esteem are well understood. Some researchers have pointed to the critical role of the family, particularly during the early years of life, to explain individual differences in self-esteem (see Harter, 1997). Other researchers have focused on changes in the school environment as one important influence on the age-related changes over time (see Eccles, Midgley, et al., 1993; Simmons & Blyth, 1987). Similarly, some researchers have suggested that changes in the nature of one's familial relationships during adolescence could contribute to the developmental declines in self-esteem during early adolescence (Eccles, Midgley, et al, 1993). Finally, the variations in the patterns of self-concepts and values discussed earlier are also likely to be relevant. All of these explanations could account for differences in self-esteem equally among females and males. They tell us less about the unique characteristics of being female that seem to put some females at greater risk for a decline in self-esteem during the adolescent years.

Several researchers have offered possible explanations for females' increased risk for declining self-esteem (e.g., Simmons & Blyth, 1987). Before presenting and discussing these explanations, we examine the ethnic group differences summarized above. African American female adolescents do not appear to be at greater risk than their male peers for declines in self-esteem.
Consequently, any viable explanations must account for both the gender and race–ethnic group patterns. We return to this point later.

The processes or mechanisms explaining the declines in European American girls' self-esteem in early adolescence are not well understood. Drawing on cumulative stress theory, Simmons and Blyth (1987) suggested this increased vulnerability results from these girls being more likely than boys to be exposed to two major life transitions at once during their early adolescent years: the physical changes associated with puberty and the transition from elementary school to junior high school. Because boys go through the physical changes associated with puberty about 18 months later than do girls, they are more likely to experience these changes after they have made the junior high school transition. Although this explanation might be useful for understanding the different pattern of change in European American girls and boys, it is not very useful for understanding the ethnic group differences in the girls' vulnerability to this school transition. That is, it is not clear why African American girls would not be vulnerable to this same dynamic.

The different patterns of social role changes associated with pubertal development for girls and boys may also have a differential impact on boys' and girls' self-esteem. For example, the social role changes in characteristics associated with heterosocial–peer relationships in European American populations may lead pubertal girls to become excessively sensitive to their physical appearance (see Buchanan, Eccles, & Becker, 1992; Eccles, Midgley, et al., 1993; Simmons & Blyth, 1987). In fact, several researchers have found that early maturation among European American girls is associated with less self-confidence, lower self-esteem, and more depressive affect (see Stattin & Magnusson, 1990; similar findings have also been found for Swedish girls).

In an attempt to investigate several possible influences at once, Lord et al. (1994) looked at several predictors of self-esteem change across the junior high school transition using the MSALT data. They based their selection of predictors on psychological models of risk and protective factors. Several investigators have suggested that personal coping resources are the key protective influences on individuals' adjustment to stressful situations, such as school transitions. Personal coping resources include relatively stable personality, attitudinal, and cognitive dispositions that promote effective adaptation, thereby reducing the potentially harmful effects of stress (Fenzel, 1991). Lord et al. proposed that a sense of autonomy, a sense of personal efficacy, and confidence in one's most salient abilities were the personal coping resources most likely to buffer against the detrimental effects of a stressful school transition (see Bandura, 1986; Harter, 1990). Of these, Lord et al. assumed that perceptions of one's abilities would be especially relevant. Several studies support a connection between these self-relevant beliefs. For example, Bohrnstedt and Felson (1983)
showed that perceived academic and athletic competence is positively predictive of self-esteem among adolescents. Similarly, Harter has shown that perceived competence in academic, social, athletic, and physical appearance domains is positively related to self-esteem, with confidence in one's physical appearance and social competence having the strongest relations, particularly among girls.

Other studies focus on the protective role that actual abilities may play as an adolescent makes the junior high transition. This work demonstrates that success in academic and social domains in the sixth grade is positively related to increases in self-esteem following the junior high school transition (e.g., Simmons & Blyth, 1987). These studies suggest that both ability self-concepts and actual achievement levels are related to the adolescents' overall self-esteem and to their adjustment to the junior high school transition. Finally, Lord et al. (1994) assumed that family factors would be important protective factors. Specifically, they focused on the opportunities provided within the family for democratic decision making and the quality of the emotional relationship between the adolescent and her or his parents.

In terms of risk factors, achievement-related worries and self-consciousness seemed the most likely candidates. For example, Elkind and Bowen (1979) have shown that self-consciousness is negatively related to self-esteem. Similarly, several studies indicate that anxiety about one's performance in the academic and social domains is negatively related to an adolescent's school performance (e.g., Willig, Harnisch, Hill, & Maehr, 1983). Eccles and her colleagues have suggested that both anxiety and self-consciousness may be particularly detrimental as the early adolescent is forced to adjust to a new school environment characterized by increased rigor in grading, less variety in evaluation techniques, and an increase in social comparison among students (e.g., Eccles, Midgley, et al., 1993). These detrimental effects are likely to be especially salient during early adolescence because this developmental period is characterized by increased self-focus and self-consciousness (see Eccles, Midgley, et al., 1993). These effects are also likely to be especially detrimental for European American girls because the standards of beauty within this cultural group are so at odds with the basic nature of pubertal changes associated with the developing female body (Orbach, 1994; Wolf, 1991).

The results of the Lord et al. (1994) analyses support these predictions. As predicted, controlling for sixth-grade self-esteem and academic ability, the psychological protective factors—positive self-concepts of one's ability in both academic and nonacademic domains—were associated with positive change in self-esteem over this school transition. As a set, students' ratings of their abilities in academic, athletic, and peer social domains and of their physical attractiveness all predicted gains in self-esteem at both waves. In competition with each other as predictors, ratings of one's phys-
ical attractiveness, math ability, and peer social ability yielded the strongest coefficients for both girls and boys. The only major gender difference in these predictive relations occurred for physical attractiveness: Confidence in one's physical attractiveness was a much stronger predictor among the young women than among the young men.

Finally as hypothesized, the psychological risk factors—worries and self-consciousness related to math, school deadlines, and social acceptance—were associated with declines in self-esteem during the junior high school transition for both girls and boys. In competition with the other predictors, only social and academic self-consciousness yielded significant negative coefficients. In addition, academic anxieties and worries were a much stronger predictor of declines in self-esteem among the boys than among the girls, despite the fact that girls reported higher mean levels on these measures.

That confidence in one's peer-related social skills and physical attractiveness emerged as such salient contributors to adolescents' adjustment to junior high school probably reflects the impact of changing pressures on adolescents at this particular period of life. Several investigators have suggested that there is an increased emphasis at this time, from both peers and families, on physical appearance, social presentation, and popularity with the opposite sex (Higgins & Eccles [Parsons], 1983; Hill & Lynch, 1983). Coupled with the new and much larger social environment of the junior high setting, confidence in one's competence in peer-social relationships and one's physical attractiveness may be particularly important protective factors.

The salience of physical appearance for the stability of these young women's self-esteem across the transition to junior high is troubling. Given that both individual differences in physical appearance and the exact nature of pubertal changes in different individuals' bodies are substantially biologically determined and thus is somewhat out of the individual's control, a focus on physical attractiveness for people who are not or do not feel attractive enough is likely to undermine some young women's self-esteem. It is also likely to push some young women toward extreme efforts to try to change their bodies to meet both real and perceived peer and societal standards. It follows that girls at this age who have a negative perception of their appearance may be at risk for developing symptoms that reflect their diminished self-esteem, such as eating disorders. In fact, in the MAGIC data, lack of confidence in one's physical appearance was one of the primary significant predictors of bulimia-related eating behaviors.

Finally, Lord et al. (1994) looked specifically at the extent to which gender itself was a significant predictor of self-esteem change after all of the other predictors were controlled. Even though gender was weakly related in a predictable pattern to several of the predictor variables as well as to self-esteem, gender added very little to the predictive power of the
regression equation when it was added at the final step of the regression model for self-esteem measured in the fall of the seventh-grade year. In contrast, being a female adolescent predicted greater than expected declines in self-esteem measured in the spring of the seventh-grade year. Thus, consistent with the findings of Simmons and Blyth (1987) and a report by the AAUW (1990), these results suggest that being a female adolescent is a risk factor for decline in self-esteem during this developmental period. However, it should be noted that this effect was quite small, and the vast majority of the young women did not experience a loss in their self-esteem across this transition—most either remained the same or experienced an increase (Eccles, Lord, et al., 1997).

Race–Ethnic Group Differences in Self-Esteem

As we noted earlier, African American girls had higher self-esteem and ability self-concepts than did European American girls in the MSALT. Next, we reran separately the regression analyses reported above for European American and African American girls. Most interesting in these analyses is the fact that none of the ability self-concepts or anxieties significantly predicted the African American girls' self-esteem. This result is consistent with Spencer and Steele's (1995) hypothesis that African American girls disidentify with the criteria that European American adolescents use to evaluate their self-worth. The Lord et al. (1994) model was based on empirical work conducted with and by European Americans. The predictors chosen likely reflect the values of this cultural group. Consequently, it should not come as a surprise that these constructs did not predict African American girls' self-esteem. But the number of African Americans in the MSALT was relatively small (73 girls).

We explored this ethnic group difference in more detail in the MAGIC study. This study's 1,100 adolescents live in a racially mixed, African American majority county in Maryland. We administered many of the same measures to this sample as were administered in the MSALT. The results reported here come from the first wave of data collection in the MAGIC study when the adolescents were in seventh grade (junior high school).

As was true for the MSALT, the African American girls in the MAGIC study had higher self-esteem than did the European American girls. We wanted to investigate why this might be the case. Given the findings in MSALT, we also wanted to expand the range of predictors to capture other aspects of adolescents' lives that might be relevant to both ethnic groups.

For the first set of these analyses, we used the following predictors: confidence in one's femininity, confidence in one's physical strength and assertiveness (which we labeled masculine skills), worries about one's weight,
school-related worries and test anxiety, social self-consciousness, confidence in one's physical attractiveness, confidence in one's academic and athletic abilities, confidence in one's popularity, and the difference between one's educational aspirations and actual educational expectations (how much education one would like vs. how much education one actually expects to get).

African American girls were higher than European American girls on each of the following predictors: confidence in their femininity ($R^2 = 10\%$), confidence in their masculine skills ($R^2 = 5\%$), confidence in their physical attractiveness ($R^2 = 16\%$), confidence in their popularity ($R^2 = 13\%$), and the difference between their educational aspirations and actual expectations ($R^2 = 1\%$). The European American girls were higher on worrying about their weight ($R^2 = 3\%$) and social self-consciousness ($R^2 = 5\%$). Clearly, the African American girls in this sample had a more positive view of themselves across the board than did the European American girls.

But do these differences explain the ethnic group difference in self-esteem? To answer this question, we ran a path analysis using simultaneous regression analyses to estimate the parameters. First, we regressed the set of proposed mediators on ethnic group to estimate the size of the relations between ethnic group membership and each mediator. Next, we regressed self-esteem on the full set of proposed mediators and an ethnic group. If the relation between ethnic group and self-esteem is no longer significant, then we can conclude that the ethnic group differences on the proposed mediators explain the ethnic group difference in self-esteem. All significant paths are summarized in Figure 3.2. As predicted, the ethnic group differences in the mediators fully explained the ethnic group difference in self-esteem (see Figure 3.2).

In addition, to parallel the analyses conducted for the MSALT, we ran regression analyses separately for each ethnic group. In these analyses,
we included indicators of academic and athletic self-concepts and anxieties as well as the set of predictors yielding ethnic group differences (i.e., those displayed in Figure 3.2). For both groups of girls, self-esteem was predicted most strongly by confidence in their femininity and physical attractiveness and by a lack of worry about their weight. In addition, for European American girls, confidence in their masculine skills and low levels of general anxiety predicted high self-esteem; for African American girls, low levels of social self-consciousness was an important predictor.

Equally important, when forced to compete for variance with a broader range of predictors, academic and athletic self-concepts did not predict self-esteem in either group. Apparently, these academic self-concepts are not as important for young women's self-esteem as other work using a more limited set of predictors suggests. Instead, constructs more directly linked to either the physical changes associated with pubertal change or physical attractiveness more generally are more salient for these young women. Whether this remains the case as these young women move through adolescence still needs to be tested. But clearly African American girls have a more positive view of themselves on all of these dimensions than European American girls.

These results suggest that the debilitating processes linked to pubertal development in European American girls may be much less pervasive among African American girls. African American girls did not show the classic declines in confidence in their physical attractiveness and increases in concerns about their popularity and their weight reported by these European American girls (and by European American girls in most other studies of adolescent development). In addition, these advantages protected their self-esteem.

To investigate this possibility further, we separated each ethnic group into early and on-time maturers (Michael, 1996, 1997). Only the European American girls' self-esteem and mental health were related to their maturational rate—with early maturing girls reporting lower self-esteem and mental health and higher rates of bulimic eating patterns. Maturational rate had no relation to these outcomes among African American girls. Again, these results suggest that pubertal development is not the same kind of risk factor for African American girls that it is for some European American girls.

The reasons for this difference need to be explored because (a) we need to understand the sources of resilience in African American girls, (b) understanding these differences will help us understand the nature of cultural differences between these two ethnic groups, and (c) they will offer insights into the kinds of preventive interventions that might help bolster European American girls' self-esteem during this critical transitional period. It seems likely that cultural differences in the standards of feminine beauty are one piece of this difference, but this hypothesis has not been studied
Other possible influences include variations in the meaning of sexual maturity and in the response of both adults and peers to signs of pubertal development.

CONCLUSION

If we learned nothing else from the work reported in this chapter, we learned that gendered self-concepts and self-esteem vary across domains and ethnic groups. We also learned that there is much more variation within groups than between groups. It is not the case that females, in general, are less confident of their abilities than males. Nor is it the case that females, in general, have less self-esteem than males. Some do but many do not. And in some domains, females in general have more confidence in their abilities than males, even during the early pubertal period of development when European American girls appear to be most at risk. The data discussed in this chapter make it clear that most females have many strengths that serve them well as they move through adolescence and into young adulthood. They express confidence in their abilities in many domains, particularly female gender role stereotyped domains. For example, they are more confident than males in their general academic abilities (averaged across subject areas) and general social skills. Both of these strengths serve them well in adjusting to school and in finding a meaningful place for themselves in this context. Consequently, it should not come as a surprise that female students are less likely to drop out of school and to get into trouble at school than are male students.

Our analyses of individual differences among females also suggest that females use their ability self-concepts and values in predictable ways to make sensible educational and occupational choices for themselves—just as sensible as their male peers. In fact, if anything our data suggest that young women place less weight in these decisions than do young men on such extrinsic job characteristics as money and status. These strengths help the majority of young women make wise choices about their educational and occupational trajectories.

Nonetheless, the results discussed in this chapter point to three problem areas for young women. First, evidence from several lines of research suggests that girls are more negatively affected by failure experiences and by anticipated failures than are boys. This sensitivity likely limits their willingness to take risks for higher rewards or more demanding opportunities. Second, many young women still believe that there is an inherent conflict between feminine goals—values and highly competitive achievement activities. Belief in this conflict creates added ambivalence and anxiety when these young women find themselves in competitive achievement settings. Third, the physical changes associated with pubertal development...
are problematic for many European American young women. Several authors have discussed the negative consequences of European American society's unrealistic and narrow standards of women's beauty (Wolf, 1991). The findings reported in this chapter both reinforce these conclusions and illustrate how culturally centered these effects are. The data suggest that African American girls are not as susceptible to these debilitating influences. They react much more positively to the physical changes associated with pubertal development. These results (the findings for African American girls) make it clear that the declines in self-esteem experienced by many European American girls are not an inevitable consequence of either pubertal development or school transitions. Instead, it is likely that these declines are firmly grounded in the unrealistic European American culture of feminine beauty.

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