

Predicting Adolescents' Academic Expectations Over Time: Understanding the Roles of Gender, Ethnicity, and SES.

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## Abstract

A broad scope of research has focused on adolescence as a critical period of development. This study investigates adolescents' academic aspirations and expectations. The predictive roles of gender, ethnicity, and socioeconomic status are discussed. Data were collected during both the seventh and ninth grade as part of the Maryland Adolescent Growth in Context (MAGIC) study (n= 1060). The sample is comprised of approximately 61% African-American and 33% Euro-American families. The median income is between \$40,000 and \$44,999 for the African-American families, and between \$50,000 and \$54,999 for the Euro-American families. Results include significant gender differences, with girls having higher aspirations and expectations. Results also include non significant differences between ethnic groups. Findings are discussed in terms of the uniqueness of the sample in providing data un-confounded by race and poverty.

## Introduction

The primary focus of this study is a longitudinal investigation of the adolescents' academic expectations and aspirations. A broad scope of research has focused on adolescence as a critical period of development. The work of McClelland (1961) was an early attempt at understanding the underlying developmental process of achievement motivation. Other researchers have addressed questions such as why gender and ethnicity differences exist in educational performance and outcomes. It has been shown that on the average, women tend to attain less education, earn lower wages, and maintain a lower status, as compared to men (Mickelson 1989). Longitudinal research of gifted boys and girls, has shown that even gifted women are underrepresented in many of the high status, professional fields (Eccles and Harold, 1992). Due to gender stratification of the opportunity structure in the United States, it is predicted that a decrease in girls' expectations and aspirations will occur between seventh and ninth grades.

Research has illustrated the disparity between ethnic groups in their level of performance, motivation, expectation, and achievement. According to census data, African-Americans achieved less schooling than Euro-Americans (Mickelson 1989). Based on this information, it is predicted that the expectations and aspirations of the African-American sub-sample will be lower than those of Euro-Americans. It is also predicted that their aspirations and expectations will decline over time. Another perspective on this topic can be found in the work of Ogbu (1981). He found that among African-American children in the U. S., school success, and perhaps success in adult life depends on the acquisition of white middle class child rearing practices.

## Hypotheses

Following census data presented in Mickelson (1989), it is predicted that boys will have higher academic aspirations and expectations than girls. Based on the findings of Eccles and Harold (1992), girls are predicted to decline in their aspirations and expectations. Based on Census data, Euro-Americans are predicted to have higher academic expectations than African-Americans. Also predicted, is a decline for African-Americans in their aspirations and expectations.

## Method

### *Design Overview*

The Maryland Adolescent Growth in Context Study (MAGICS) is a longitudinal project focusing on adolescent development. Three waves of data exist for the MAGICS participants. The first wave of data collection took place in 1991, while our "target youth participants" were in the seventh grade. Participants next took part in a telephone interview during 1992. The most recent wave of data was collected during the ninth grade.

### *Subject*

At the first wave of data collection, the sample consisted of 1477 seventh graders and their respective parents. The students were chosen from a pool of 23 public middle schools in Prince Georges County, Maryland. Data were again collected when the subjects were in ninth grade (N=1060). The sample is comprised of

approximately 61% African-American and 33% Euro-American families. By gender, there are 49% girls, and 51% boys. Data were collected via face-to-face interviews with the target adolescent and their respective primary care giver. Interviews took place in the subjects home.

### Measures

As a measure of academic aspiration the following question is asked during the seventh and ninth grade interviews: "If you could do exactly what you wanted, how far would you like to go in school?"

- (1) 8th grade or less
- (2) 9-11th grade
- (3) Graduate from high school
- (4) Post-high school vocational or technical training
- (5) Some College
- (6) Graduate from a business college or a two year college with an Associates degree
- (7) Graduate from 4 year College
- (8) Get a master's degree or a teaching credential
- (9) Get a law degree, a Ph. D., or a medical doctor's degree.

As a measure of academic expectation, the following is asked during the seventh and ninth grade interviews: "We can't always do what we most want to do. How far do you think you actually will go in school?"

- (1) 8th grade or less
- (2) 9-11th grade
- (3) Graduate from high school
- (4) Post-high school vocational or technical training
- (5) Some College
- (6) Graduate from a business college or a two year college with an Associates degree
- (7) Graduate from 4 year College
- (8) Get a master's degree or a teaching credential
- (9) Get a law degree, a Ph. D., or a medical doctor's degree.

For the purpose of this study, the measure of SES is based on the level of parent education, and family income. The 1991 parent interview contained an open ended question measuring the highest grade completed by the parent: "What is the highest grade in school that you have completed?" In measuring family income, the primary care giver is asked the following closed ended question: "From all sources of income you mentioned, tell me your total family income before taxes in 1990."

1. Less than \$5,000
2. Between \$5,000-9,999
3. Between \$10,000-14,999
4. Between \$15,000-19,999
5. Between \$20,000-24,999
6. Between \$25,000-29,999
7. Between \$30,000-34,999
8. Between \$35,000-39,999
9. Between \$40,000-44,999
10. Between \$45,000-49,999
11. Between \$50,000-54,999
12. Between \$55,000-59,999
13. Between \$60,000-64,999
14. Between \$65,000-69,999
15. Between \$70,000-74,999
16. More than \$75,000

### Results

Significant gender differences were found in both waves of data. Girls were found to have higher aspirations in the seventh grade  $t(1455)=3.27, p<.05$ , and in the ninth grade  $t(1041)=5.85, p<.05$ . Girls were also found to have significantly higher expectations than boys in the seventh grade  $t(1428)= 3.09, p<.05$ , and in the ninth grade  $t(1041)= 5.64, p<.05$ .

Analyses revealed that ethnicity was not a significant predictor of the adolescents' aspirations or expectations. There were no significant differences found between African-American and Euro-American adolescents. T-tests indicate the following results: Aspirations in seventh grade  $t(961) = 0.149$ ,  $p > .05$ , and in the ninth grade  $t(721) = -0.87$ ,  $p > .05$ . Academic expectations in the seventh grade  $t(1036) = 1.04$ ,  $p > .05$ , and in the ninth grade  $t(789) = 1.26$ ,  $p > .05$ .

Longitudinal differences were tested for in all sub-groups. Significant differences were found only for girls. First there was a significant difference in their expectations from the seventh to the ninth grade  $t(508) = -3.19$ ,  $p < .05$ , and second there was a significant difference in their aspirations from seventh to ninth grade  $t(511) = -3.04$ ,  $p < .05$ . Both of these differences were in the direction of higher academic achievement.

**TABLE 1**  
Means and Standard Deviations for Measures

	Mean	SD
Family Income	10.03	4.23
Parent Education	13.33	2.25
Aspirations 7th grade	7.64	1.56
Expectations 7th grade	6.81	1.70
Aspirations 9th grade	7.81	1.39
Expectations 9th grade	7.03	1.57

**TABLE 2**  
Means and Standard Deviations for Measures by Sub-Samples

	Mean	SD	t value, prob
<b>Boys</b>			
<u>Aspirations</u>			
7th Grade Academic Aspirations	7.50	1.50	
9th Grade Academic Aspirations	7.59	1.39	-1.42 ns
<u>Expectations</u>			
7th Grade Academic Expectations	6.74	1.54	
9th Grade Academic Expectations	6.78	1.52	-.68 ns
<b>Girls</b>			
<u>Aspirations</u>			
7th Grade Academic Aspirations	7.88	1.50	
9th Grade Academic Aspirations	8.07	1.27	-3.04**
<u>Expectations</u>			
7th Grade Academic Expectations	7.09	1.68	
9th Grade Academic Expectations	7.33	1.52	-3.19**
<b>African-Americans</b>			
<u>Aspirations</u>			
7th Grade Academic Aspirations	7.73	1.53	
9th Grade Academic Aspirations	7.85	1.38	-1.95 ns
<u>Expectations</u>			
7th Grade Academic Expectations	6.89	1.68	
9th Grade Academic Expectations	7.01	1.63	-1.71 ns
<b>Euro-Americans</b>			
<u>Aspirations</u>			
7th Grade Academic Aspirations	7.64	1.43	
9th Grade Academic Aspirations	7.77	1.29	1.78 ns
<u>Expectations</u>			
7th Grade Academic Expectations	6.99	1.46	
9th Grade Academic Expectations	7.12	1.37	-1.86 ns

Note. ns = not significant, \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

**TABLE 3**  
**Difference Scores for Paired Sub-Samples**

	<u>T-Value, Probability</u>
Longitudinal Differences	
Aspirations 7th to 9th	3.11**
Expectations 7th to 9th	2.74*
Gender Differences	
7th grade aspirations	3.27***
9th grade aspirations	5.85***
7th grade expectations	3.09**
9th grade expectations	5.64***
Ethnicity Differences	
7th grade aspirations	-1.44 ns
9th grade aspirations	-.87 ns
7th grade expectations	1.04 ns
9th grade expectations	1.26 ns

Note. ns = not significant, \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

### Discussion

The purpose of this study was to evaluate gender and ethnicity differences in academic aspirations and expectations. Analyses of the longitudinal data illustrate significant differences between boys and girls. While significant, the differences were not in the predicted direction. The girls in this sample aspired and expected at levels higher than boys in both the seventh and ninth grades. Also contrary to the predictions made in the introduction, girls did not show a decrease in expectations longitudinally. Instead they were the only group that had significant difference scores over time. These surprising results could be due to a number of factors. The Pollyanna theory suggests that today young women are likely to be optimistic about their future. Although they may be aware of the sexism that their predecessors experienced in the workplace, it is interpreted as 'a problem that the women's movement has already addressed' (Mickelson, 1989).

Some of the most surprising results in the present study were those of the ethnicity comparisons. Differences between African-American and Euro-Americans were found to be non significant. The current data challenge the notion that African-American academic achievement aspirations are generally lower than those of Euro-American children and that this group is often classified as at risk. The present study depicts African-Americans who aspire to achieve academically, at levels not significantly different from those of Euro-Americans. Historically the literature on social class and aspiration has been confounded with ethnic samples that fall below the poverty level (e.g., Hess and Shipman, 1965; 1967; 1968; Hess et al., 1968; Hess 1970). It is more likely that some of these findings reflect socioeconomic differences. It is critical to disengage ethnicity from SES. The strength of the present study is its ability to unconfound the two, in that the sample is relatively heterogeneous in terms of family income, parent education, children's expectations and aspirations. Which gives evidence to the fact that family income and parent education are likely to be the more closely related to achievement aspirations than ethnicity.

### References

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