

THE INTERRELATIONSHIPS AMONG  
HIGH SCHOOL CONTEXTS AND  
SOCIOECONOMIC STATUS:  
An Examination of Enrollment Outcomes

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# Outline

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- The Study
  - ▣ Background & Context
  - ▣ Theory & Evidence
- Research Questions
- Methods
- Results: Significant findings
  - ▣ Student-level
  - ▣ School-level
- Discussion
- Implications

# The Study

## □ Purpose

- Provide new empirical evidence of how high school socioeconomic context influences two-year and four-year college enrollment.
- Improve our understanding of the secondary-postsecondary nexus to inform policies and practices aimed at improving access to college for all students.

## □ Preview of findings

- Educational contexts have lasting influences across educational settings.
- Some student- and school-level resources compensate for disadvantages, while other student- and school-level resources perpetuate disadvantages based on low socioeconomic status of high schools.

# Background & Context

## □ Relevant

- The notion that stratification of schools creates and perpetuates social inequality is a widely held belief.
- For nearly 50 years social scientists have been concerned about differences between high schools and the effects these differences may have on student's academic achievement or educational opportunities.

## □ Timely

- College-readiness and postsecondary pathways occupy a central part of the Obama Administration's American Graduation Initiative and call for every American to "commit" to at least one year of postsecondary education.
- ELS:2002 – Nationally representative sample of students nested within high schools.

# Background & Context

## □ Increasing demand and access

### ▣ Postsecondary aspirations, applications, and enrollment

- 1970s: 5.8 million students, 50% of all high school grads.
- 2000: 9.4 million students, over 60% of all high school grads.
- Today, roughly two out of every three high school graduates enroll in one of approximately 4,000 higher education institutions.

## □ Stratification of the higher education system

### ▣ Disadvantages among racial/ethnic minorities and low-income students:

- 2yr versus 4yr college attendance
- Selectivity of institution attended
- Persistence and completion rates

# Policy Perspective & Project Goals

## □ Policy Perspective

- High schools facilitate college enrollment and have long been the center of interventions (GEAR UP, Upward Bound, Talent Search).
- The high school context may structurally determine a student's range of college choices and preserve socioeconomic inequalities.
- Strategies to achieve student-body diversity *and* academic profile targets are shifting attention away from ascribed characteristics (race sensitive admissions policies) and towards aspects of the high school context (Alon & Tienda, 2007).

## □ Project Goals: Translational research

- Explore the relationships between education outcomes and malleable factors, as well as mediators and moderators of those relationships
- Inform the development of interventions

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# Theory and Evidence

# Theory & Evidence

- The conceptual basis for this study places the high school at the foundation of students' college decision-making.
- We draw from two primary areas:
  - ▣ Models of social reproduction, status attainment, and social mobility.
  - ▣ College choice models showing the influence of economic, human, social, and cultural capital resources.



# Social and Cultural Resources

- McDonough (1997)
  - Organizational *habitus*: School-level resources may narrow the range of postsecondary options available to students and affect college enrollment
  
- Perna & Titus (2005)
  - Organizational norms that support parent-to-school involvement exert an influence on four-year college enrollment
  
- Engberg & Wolniak (2010), Hill (2008)
  - School resources that facilitate college-linking process improve the likelihood of college attendance, particularly resources that inform students about the financial aid and college choice process.

# Economic, Financial, and Info Resources

- Postsecondary education decisions are a function of:
  - ▣ Academic accomplishments
    - Enrollment in college preparatory tracks
    - Mathematics coursework completed
    - Standardized test scores and high school grade point averages
  - ▣ Financial resources
    - Students from lower-income families are more sensitive to changes in college costs and financial aid.
  - ▣ Access to information and understanding college choice
    - Particularly disadvantage first-generation students
    - May partially explain disparities in college enrollment among low-income, Black, and Hispanic students.

# Summary

- Summary
  - A range of economic, human, cultural, and social network resources influence students' educational development.
  - Evidence suggests a central role of the high school context in providing opportunities for students to access various forms of capital and social network resources.
- Building on past work, we examine the interdependent relationships between students, high school contexts, and postsecondary enrollment.

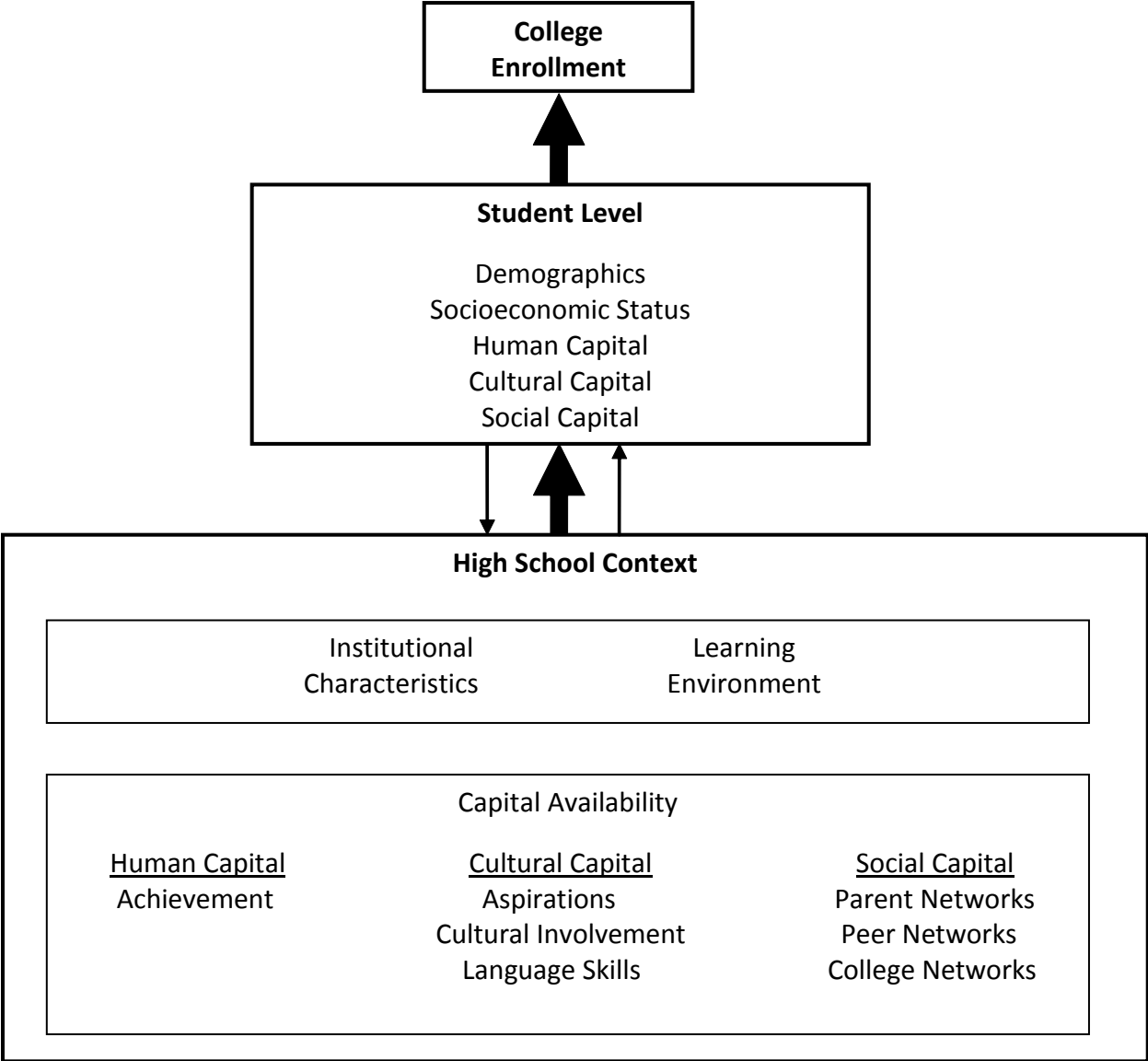


# Research Questions and Conceptual Framework

# Research Questions

- Central hypothesis: The socioeconomic context of high schools conditionally influences the effects of capital resources (economic, human, social, and cultural) on students' postsecondary enrollment.
  - ▣ **Question 1.** Do individual-level enrollment choices and access to resources differ by the high school socioeconomic context?
  - ▣ **Question 2.** Do individual-level determinants of postsecondary attendance differ across high school socioeconomic contexts, controlling for the availability of resources at the high school level?
  - ▣ **Question 3.** Do school-level determinants of postsecondary attendance differ across high school socioeconomic contexts, controlling for differences in student-level characteristics?

# CONCEPTUAL FRAMEWORK FOR POSTSECONDARY ENROLLMENT





# Methods



# Methods: Data and Sample

- The ELS study incorporates a longitudinal and multi-level design based on information collected from students, parents, teachers, librarians, and school principals.
- The ELS incorporated a multi-stage sampling frame in which schools were stratified across region, urbanicity, and school control.
- Approximately 26 students were randomly selected within each school
- The analytic sample for this study is based on the 2004 panel of students who were seniors in high school and followed up again in 2006
- Our final analytic sample contained 11,950 students from one of 740 high schools.
- Applying the panel and school weights resulted in a weighted sample of approximately 2.9 million students from 22,660 schools.



# Student-Level Measures

- **Dependent Variable:**
  - Multinomial variable indicating attendance at 2yr, 4yr, or no college
- **Demographics and Socioeconomics:**
  - Gender, Race, and SES
- **Human Capital:**
  - Mean score based on highest level of math, #AP courses, and GPA
- **Cultural Capital:**
  - Number of family/friends who desire student to attend college
  - Frequency of parent-student involvement in cultural activities
- **Social Capital:**
  - Parent Networks: Involvement w/school organizations; Parent-to-Parent contact
  - Peer Networks: Number of friends attending 2yr and 4yr colleges
  - College-linking Networks: Student seeking information about college; Student discusses school and college plans with parents

# School-Level Measures

- SES Segmentation Variable:
  - ▣ Consisted of two percentile-ranked measures: % students on free/reduced lunch (publics) and grand mean SES of school (privates)
- Institutional Characteristics:
  - ▣ Sector, region, and structural diversity
- Aggregates (grand means) of individual-level human, cultural, and social capital constructs
- Additional Variables:
  - ▣ Percentage of 2003 graduates attending a 2yr or 4yr college
  - ▣ Percentage of students in college-related programs

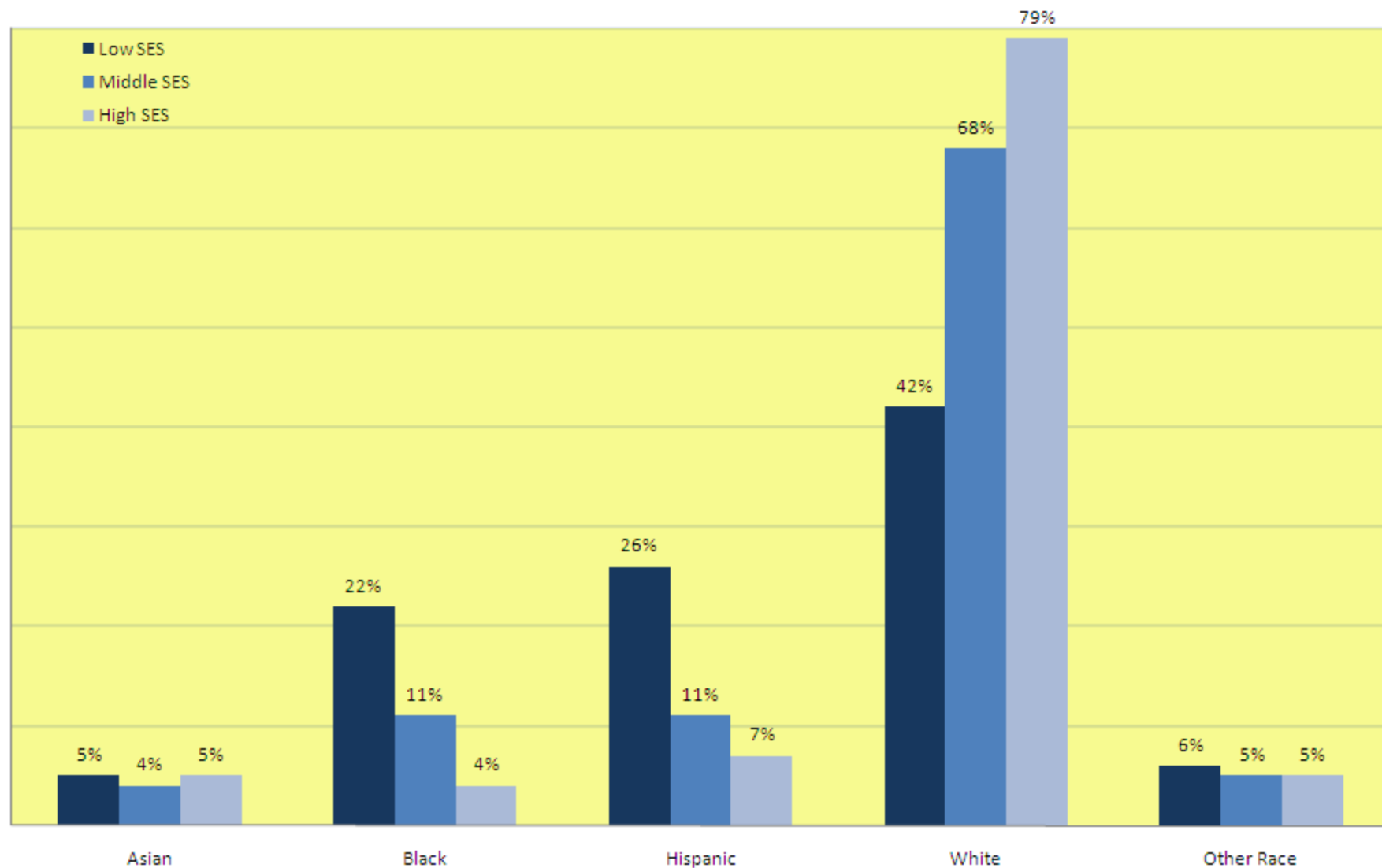
# Analytic Approach

- Missing value analysis
- Exploratory factor analysis
- Descriptive analysis of student-level and school-level variables across low-, middle-, and high-SES schools
- HGLM: Using the multinomial logit function
  - ▣ Omnibus model
  - ▣ School-level interaction model
  - ▣ Slopes as outcomes
  - ▣ Conditional models

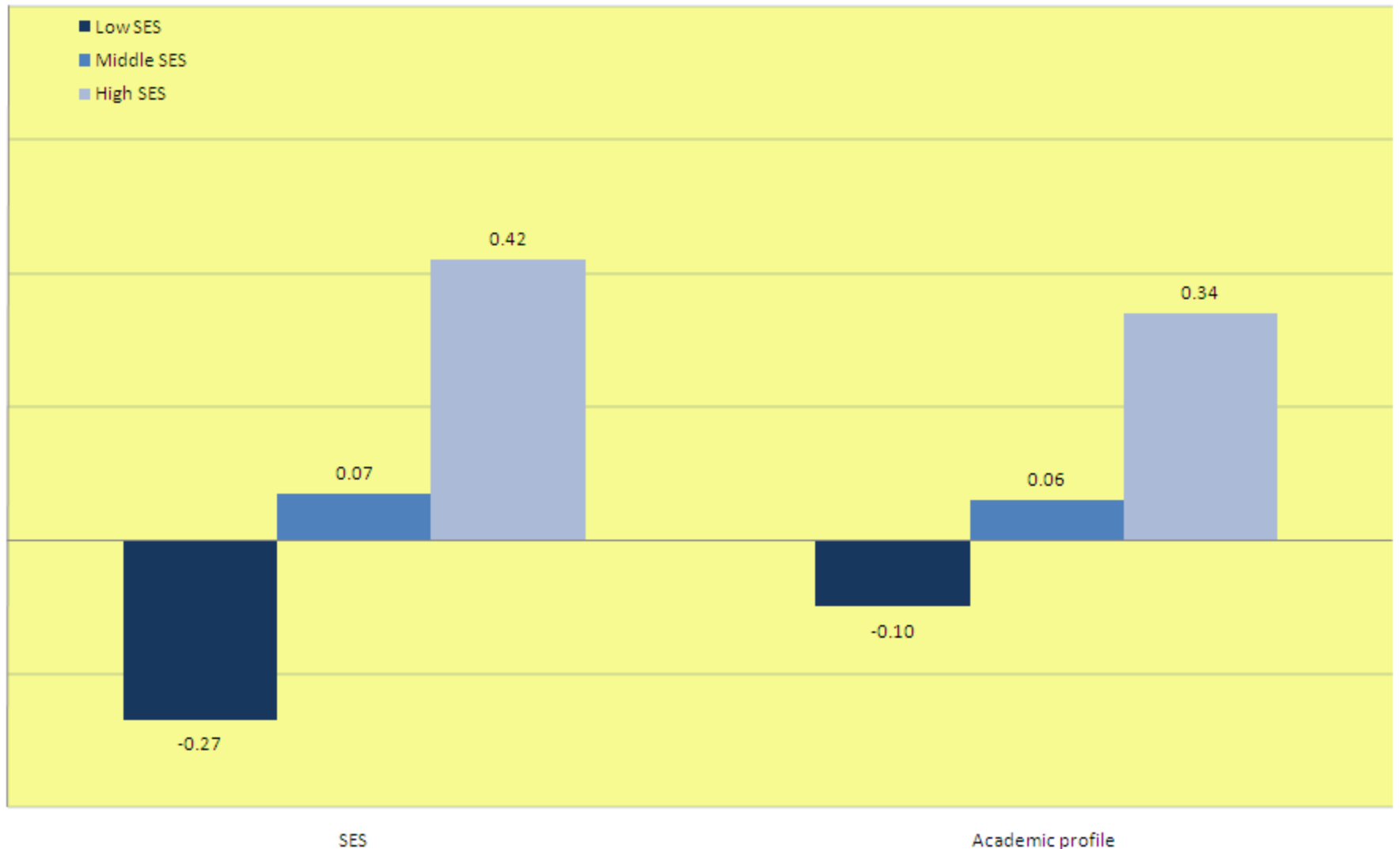


# Descriptives by SES School

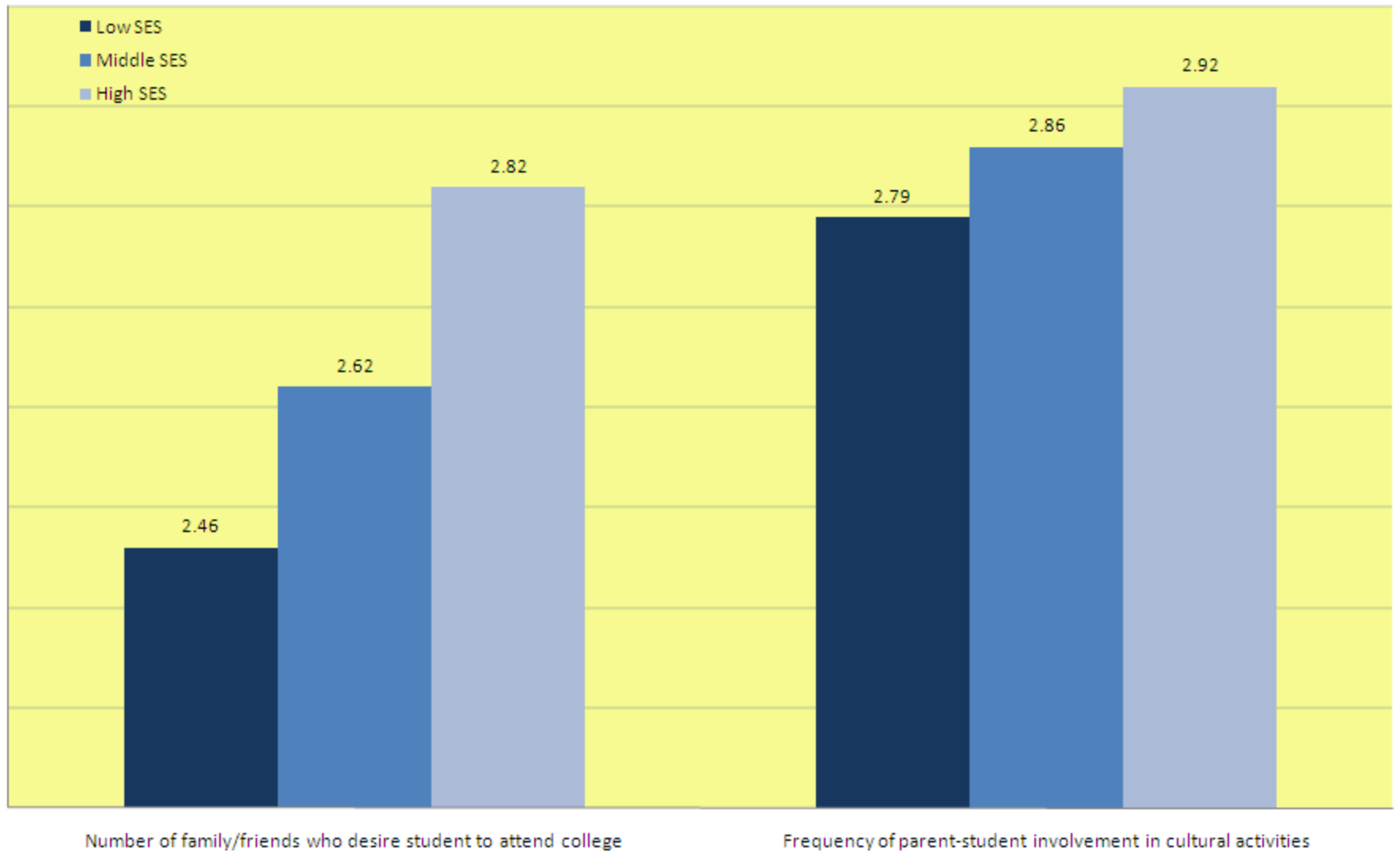
## Racial Classification by SES School Classification



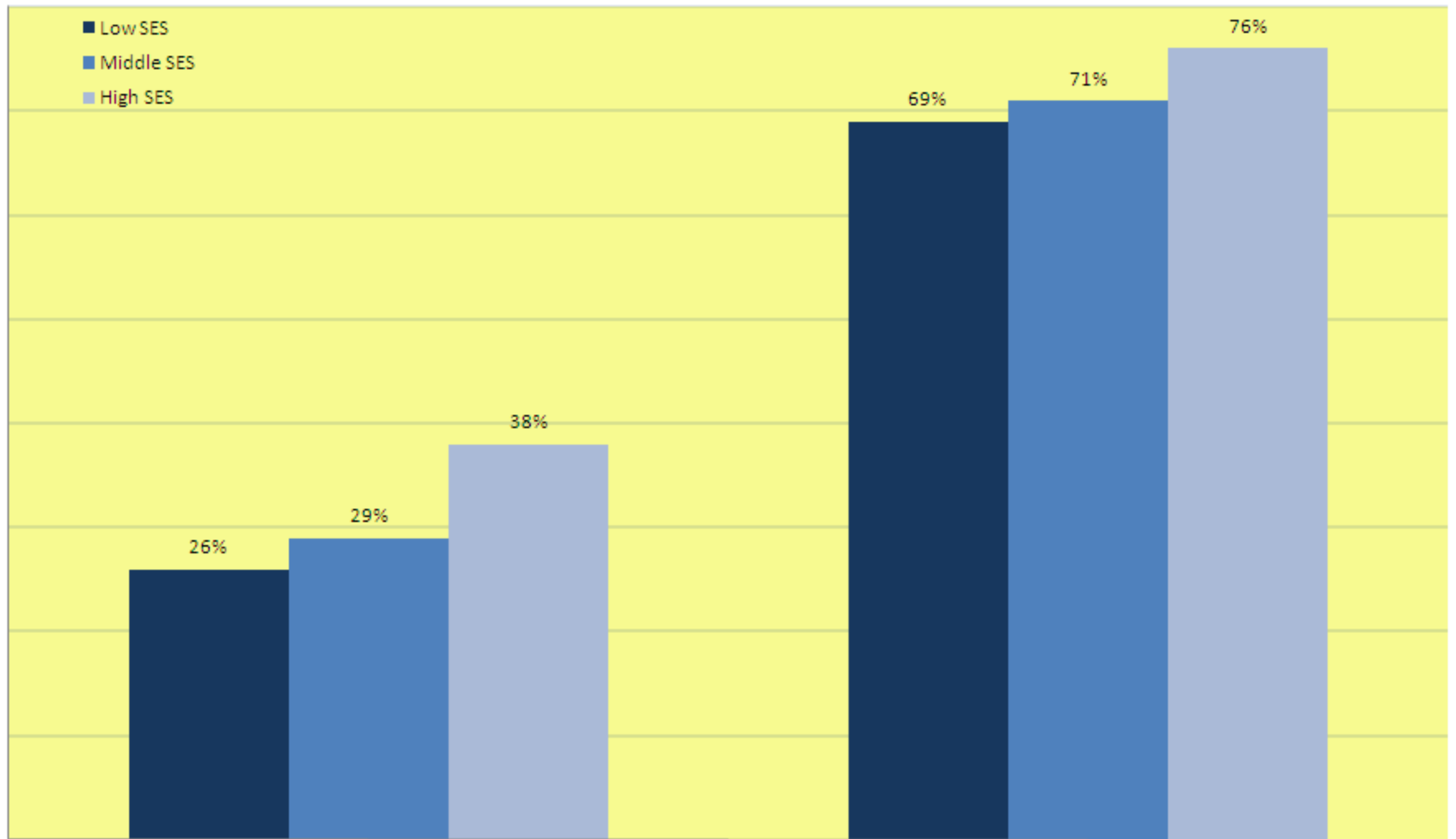
## Student SES and Academic Profile by SES School Classification



## Cultural Capital by SES School Classification



## Parent Networks by SES School Classification

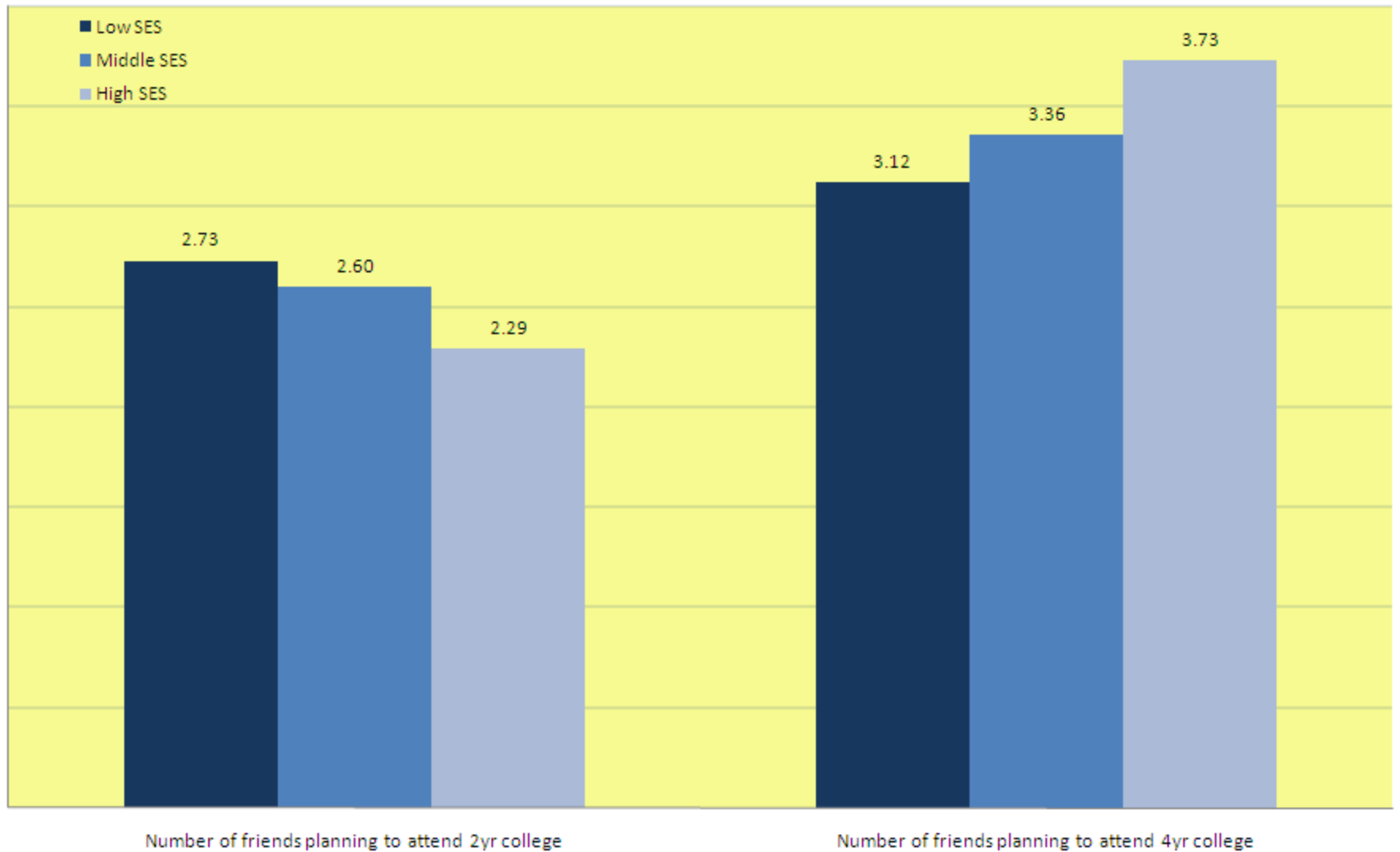


Percentage of school-based organizations parents are involved in

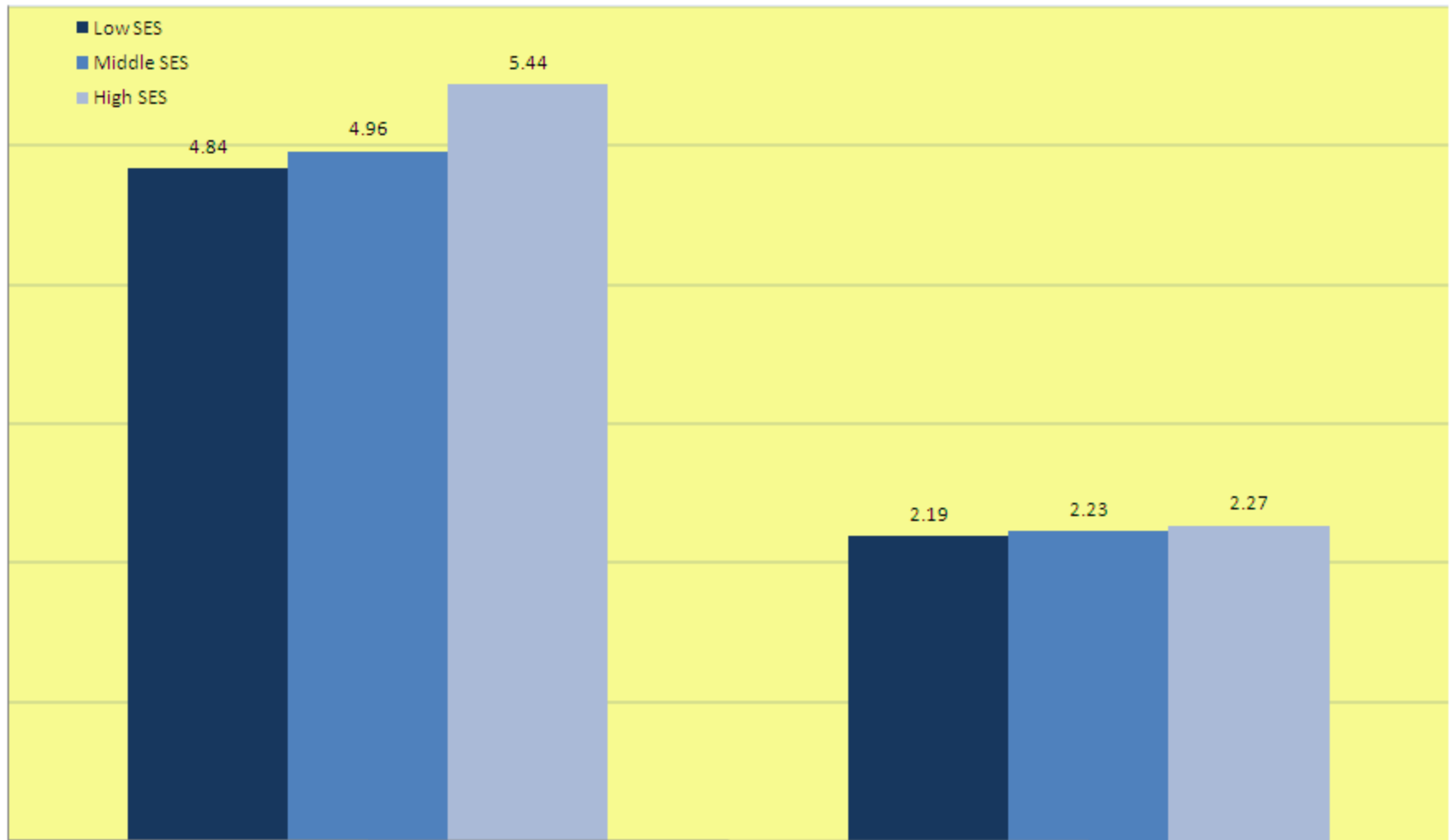
Percentage of student's friends parents known by student's parents



## Peer Networks by SES School Classification




## College-Linking Networks by SES School Classification



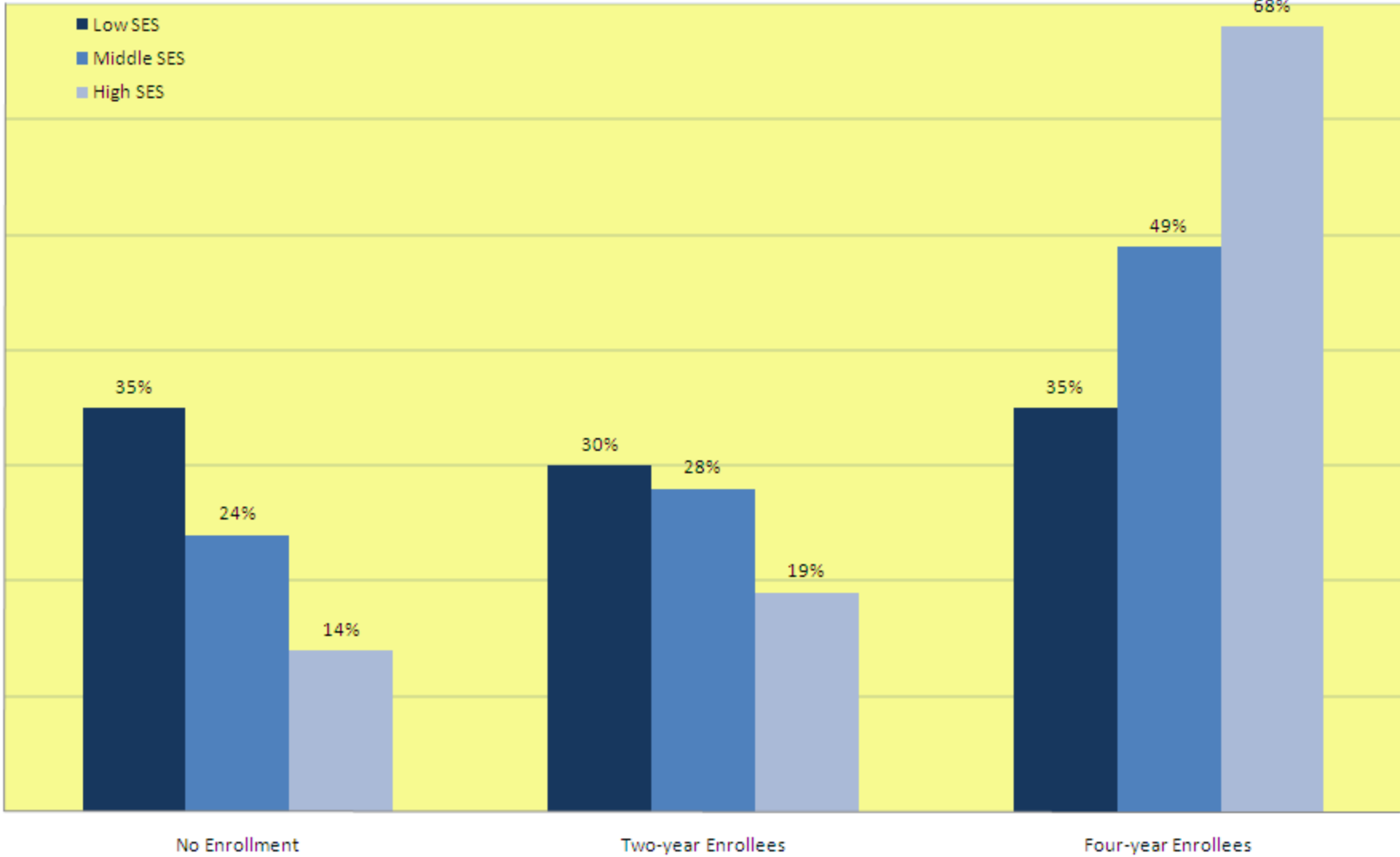
Number of individuals from whom student seeks out college entrance information

Frequency student discusses school and college plans with parents

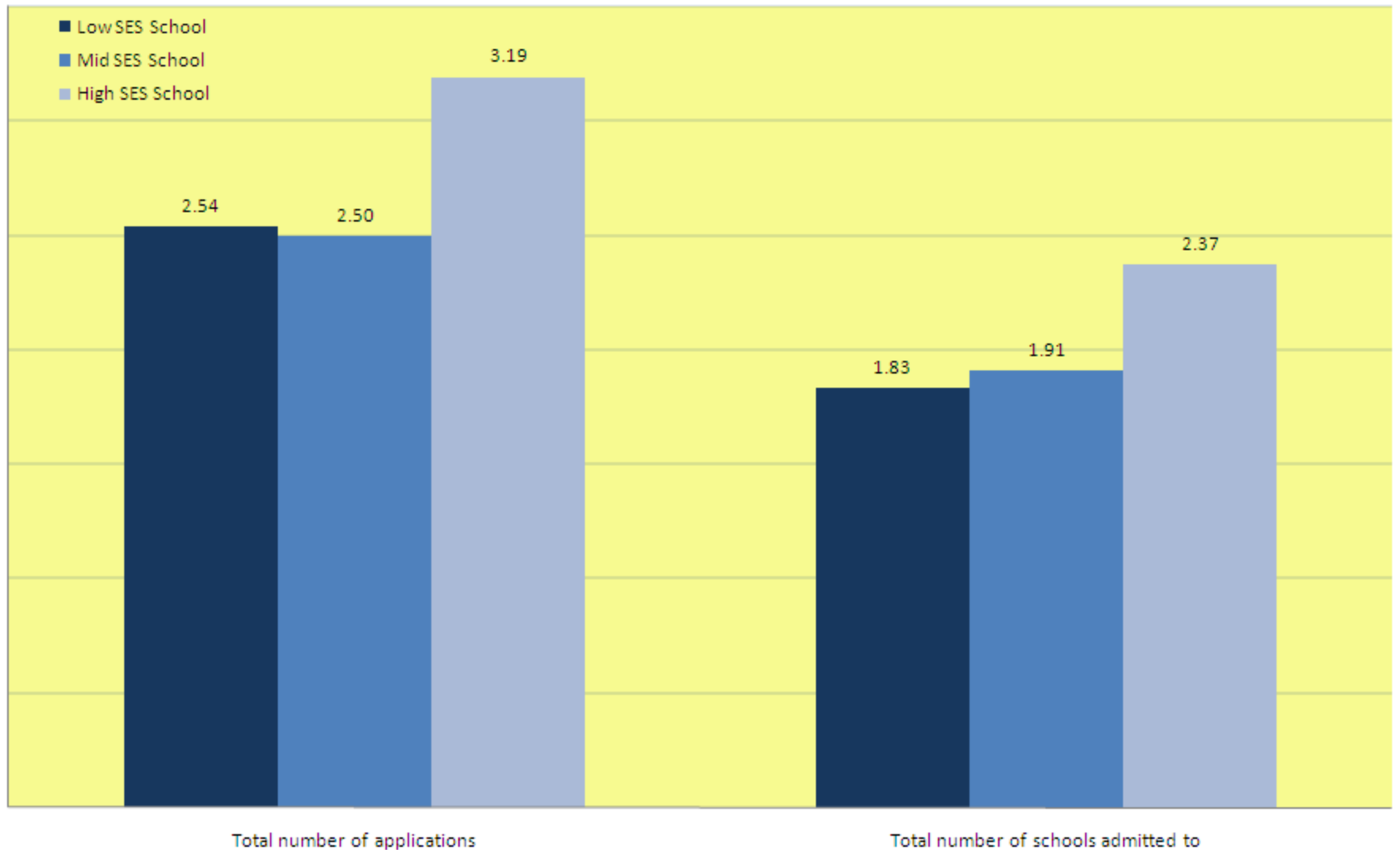


# Enrollment Characteristics by SES School

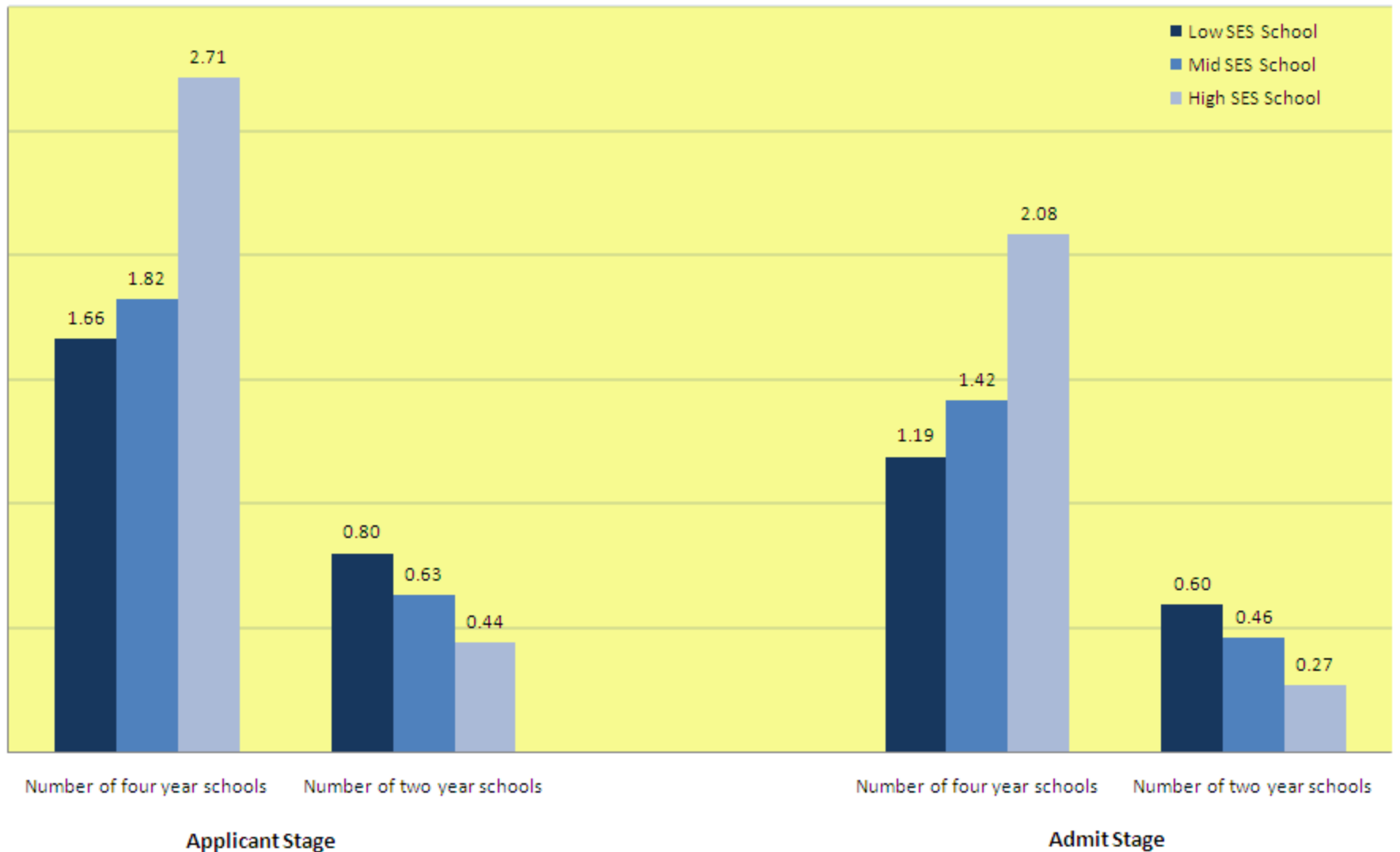
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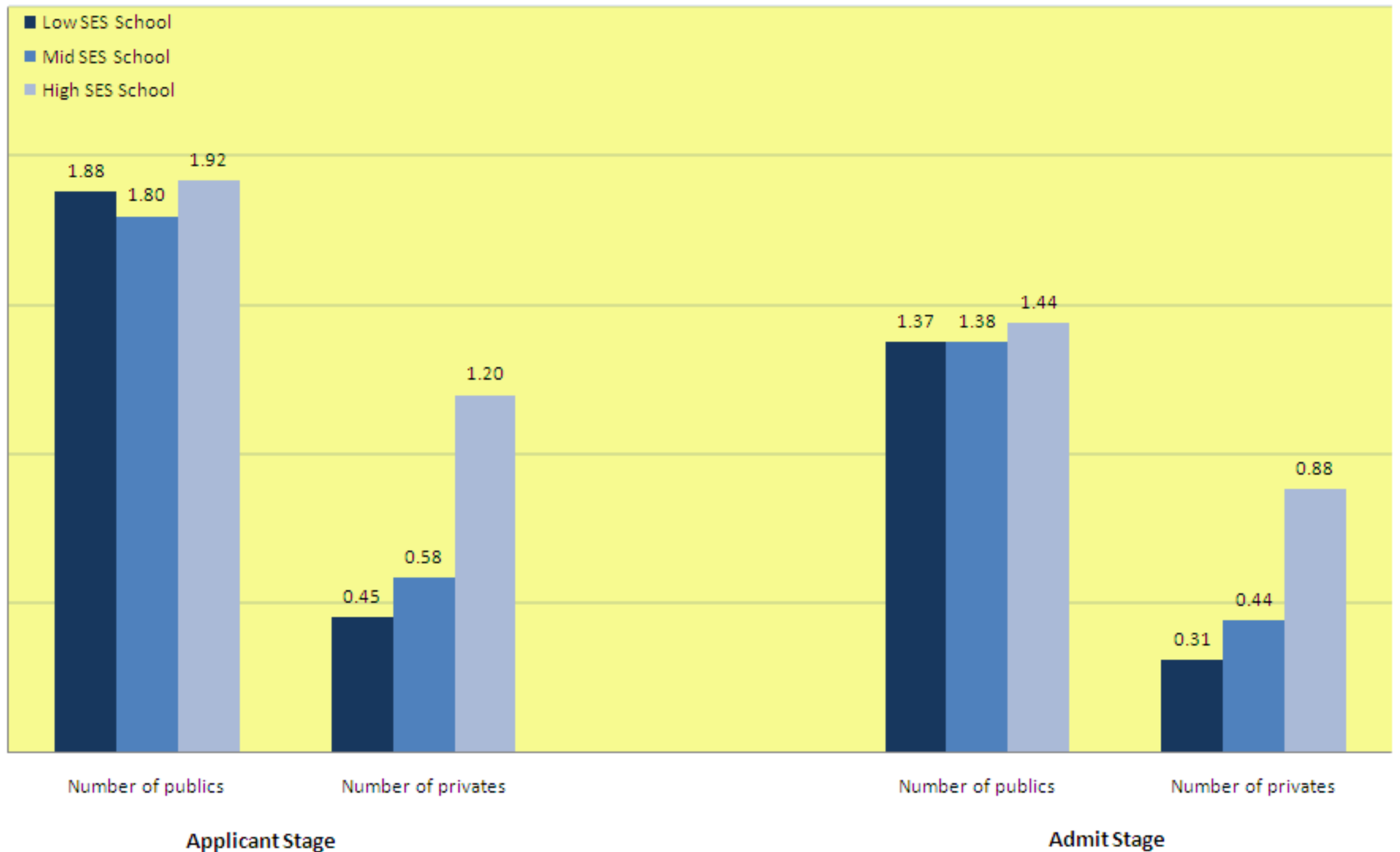
## Application and Admittance by SES School Classification



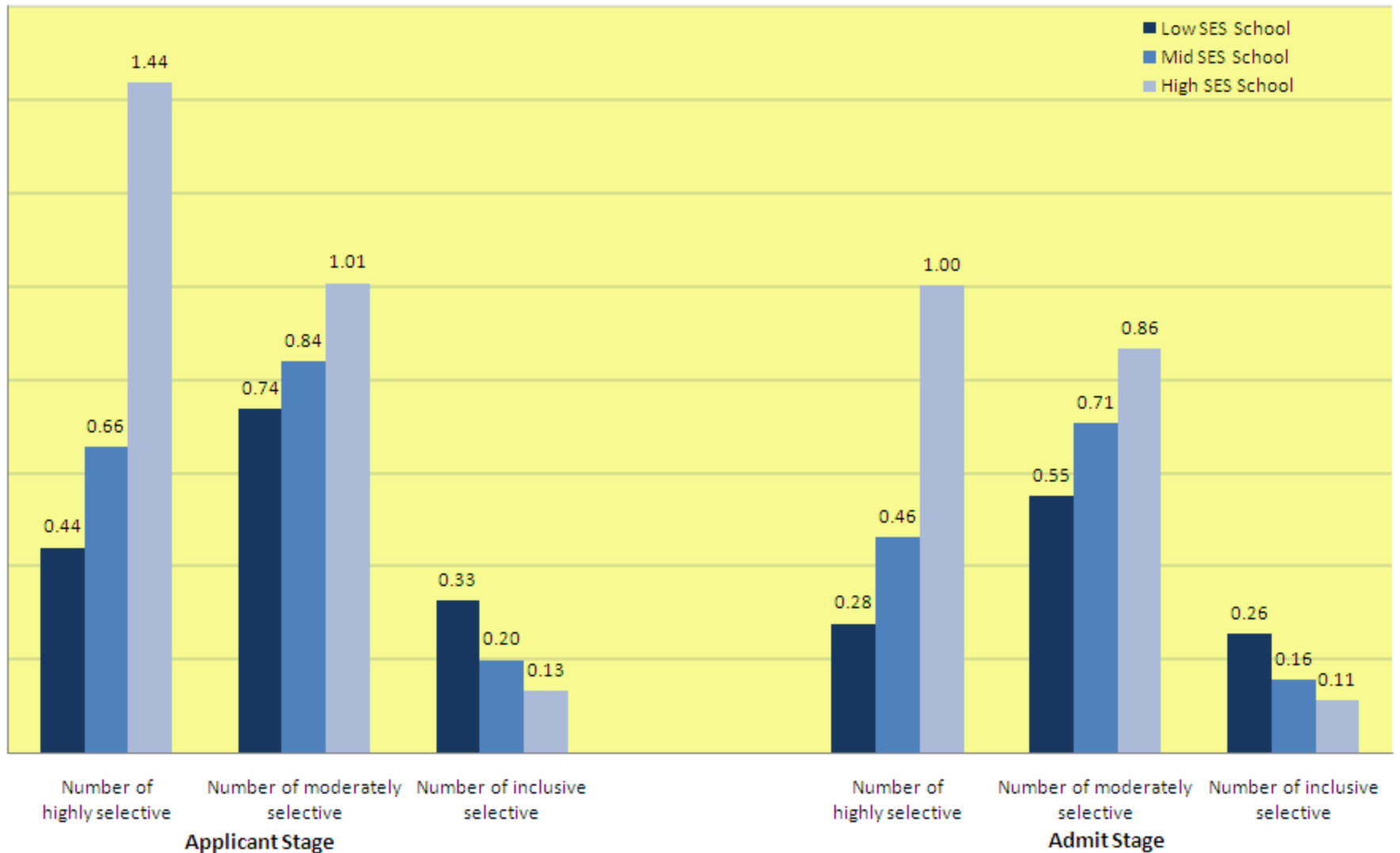
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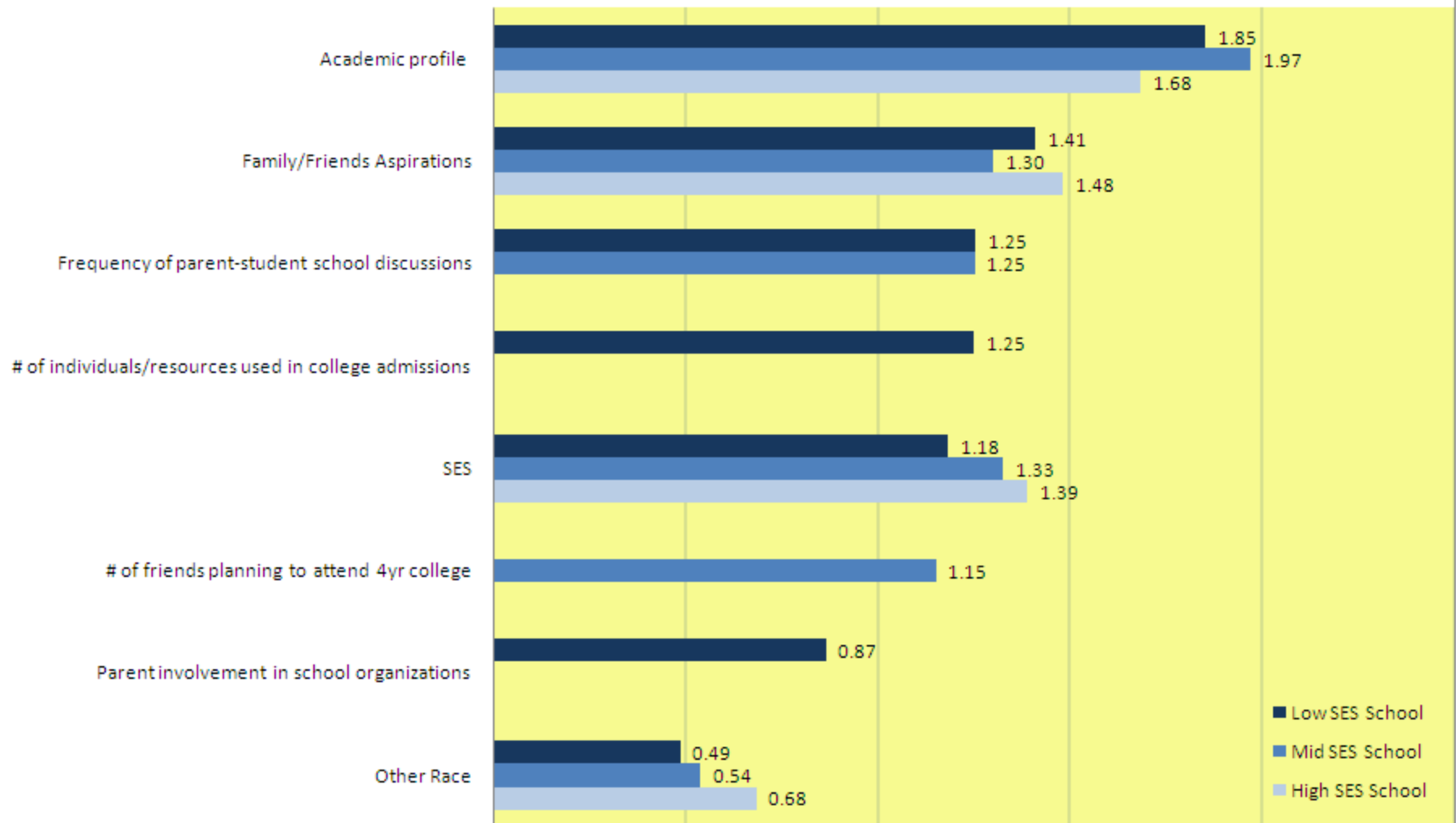




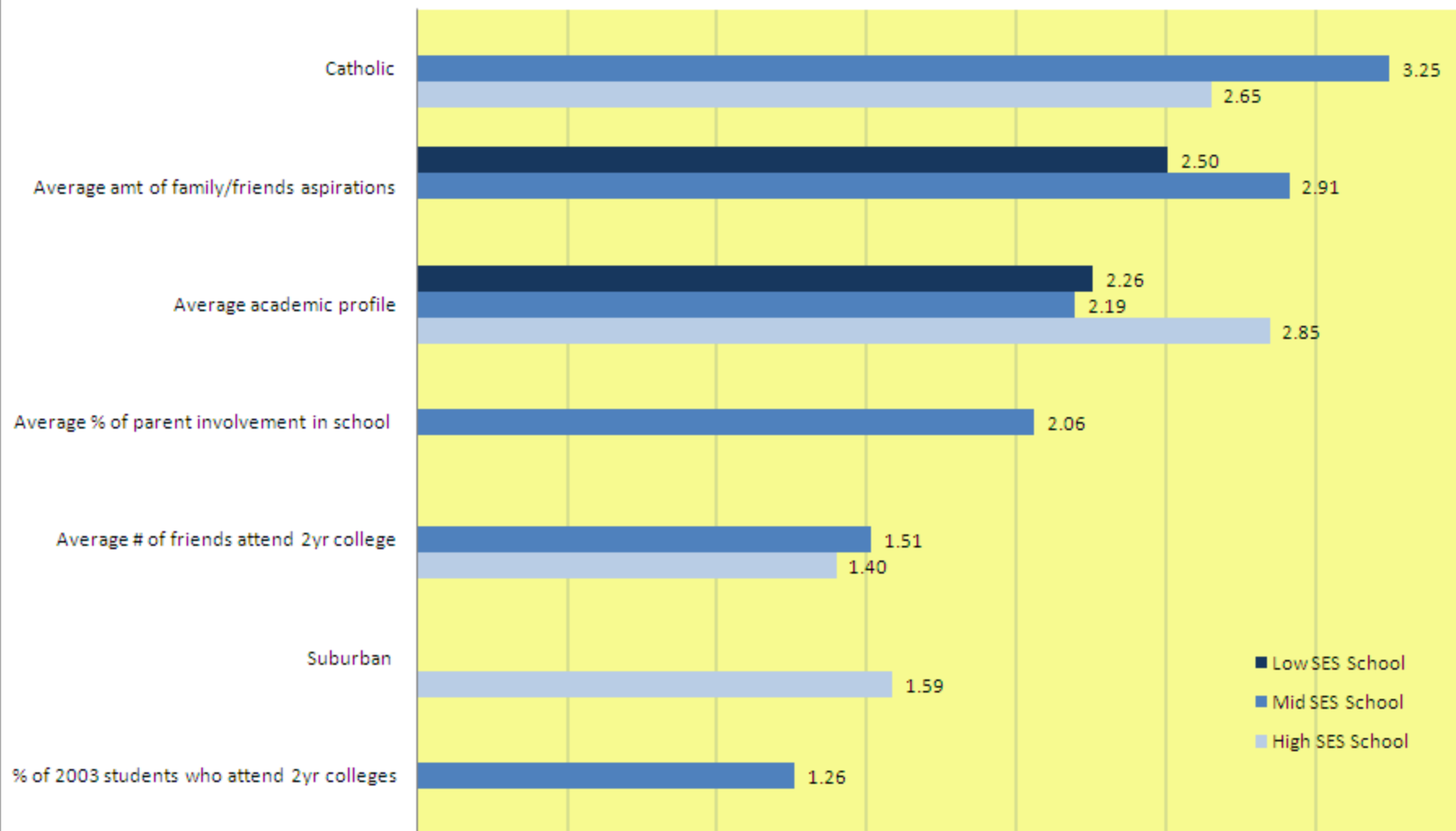
# HGLM Models



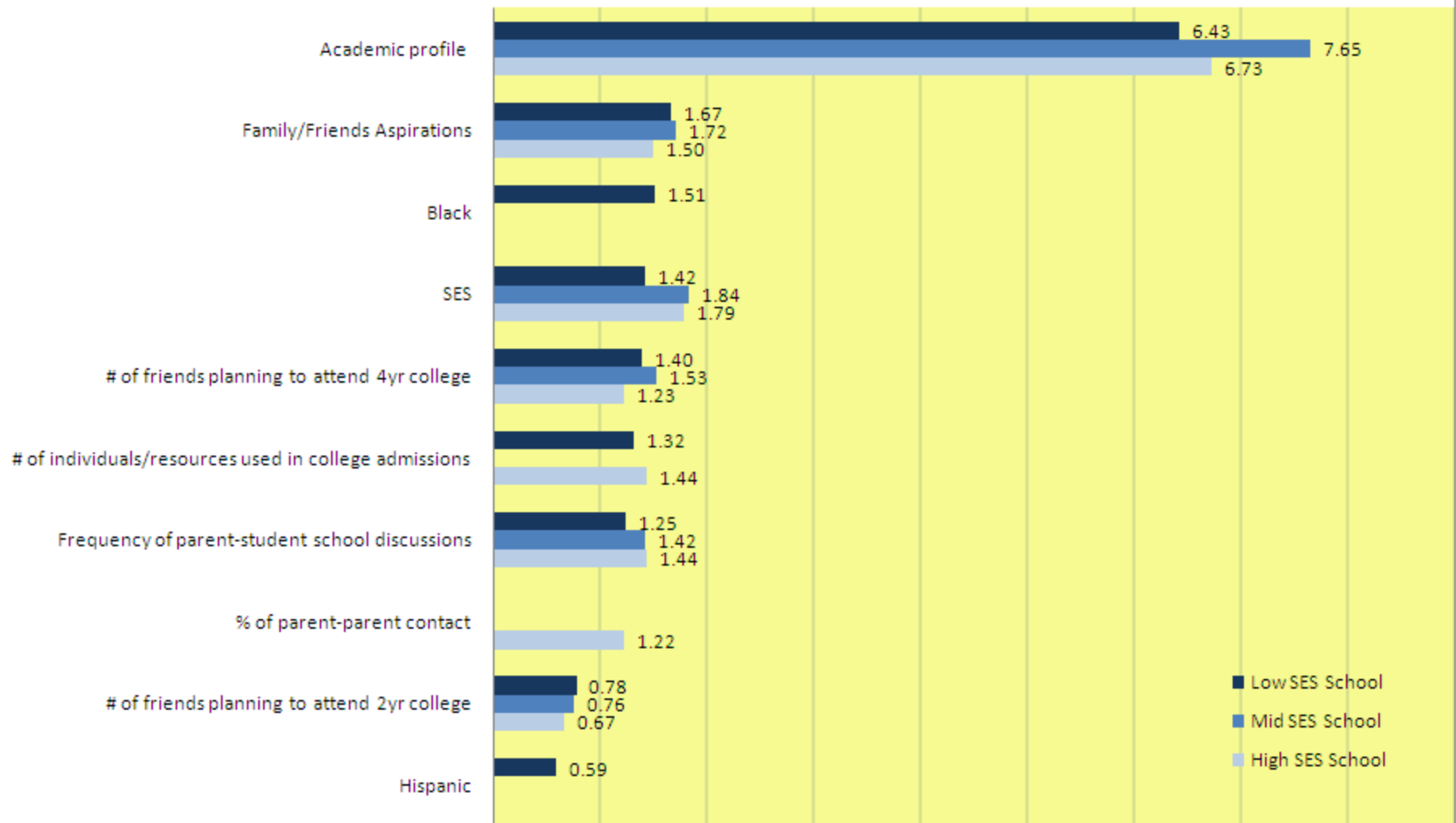
## Significant Individual-Level Effects for Two-Year Enrollment by School SES



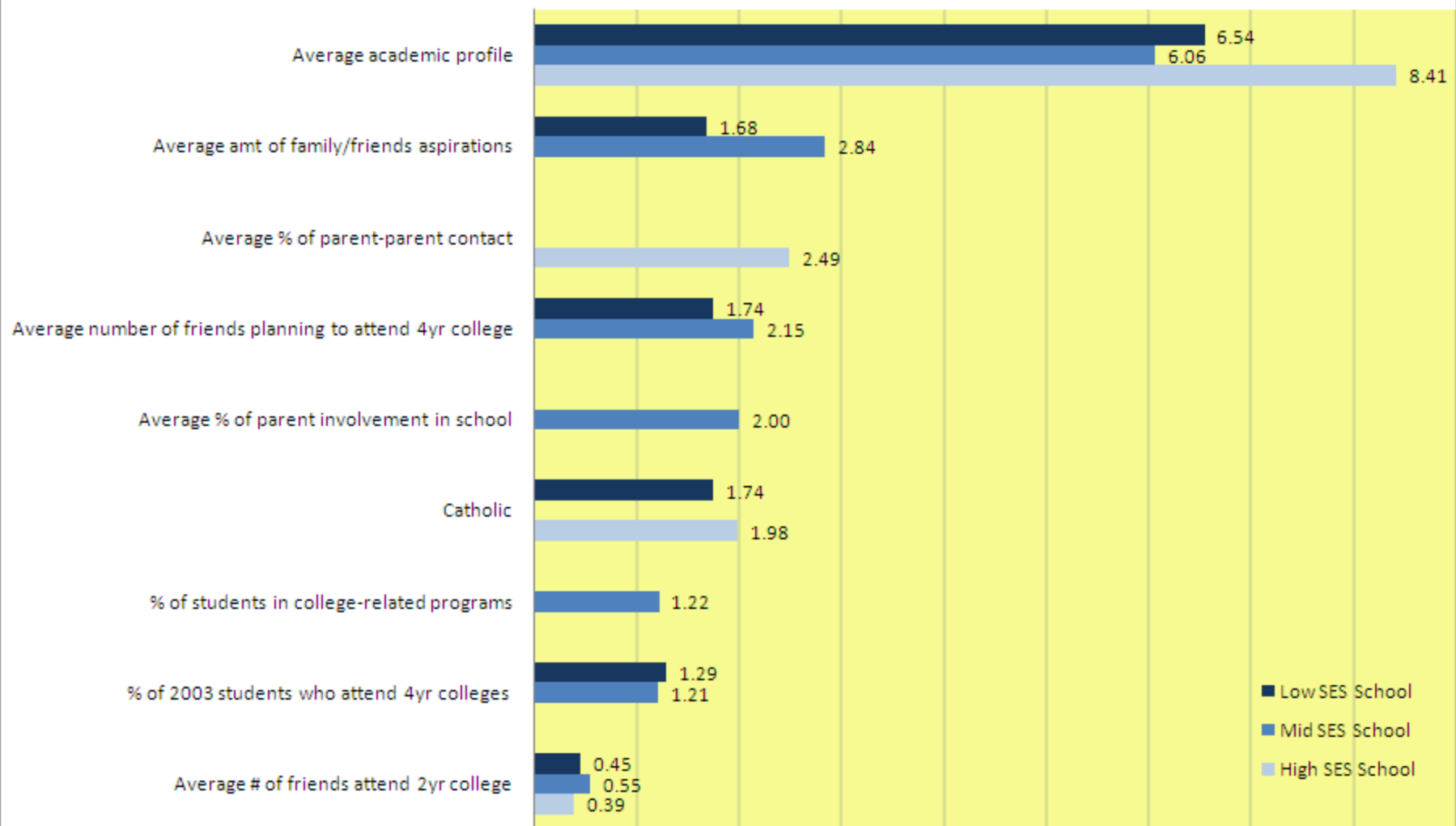
## Significant School-Level Effects for Two-Year Enrollment by School SES



## Significant Individual-Level Effects for Four-Year Enrollment by School SES



## Significant School-Level Effects for Four-Year Enrollment by School SES





# Discussion and Implications

# Discussion: Resource Allocation

- Lower SES schools were associated with the least amount of human, cultural, and social capital, as well as the lowest percentages of students attending four-year colleges
  - Study provides a means of comparison across public and private colleges based on our socioeconomic classification index
  - While several study have examined resource allocation at the individual-SES level, few have done so at the school level

# Discussion: Academics and Aspirations

- High-SES schools were associated with the strongest organizational effects in relation to academics
- Low- and middle-SES schools were associated with the strongest effects in relation to aspirations
  - ▣ These findings add to the existing research on academic preparation and aspirations by highlighting the accentuating and compensatory influences of the high school habitus
  - ▣ The pronounced effects of academic preparation resonate with the current administration's focus on “world-class academic standards”



# Discussion: Peer and College-Linking Networks

- For students attending low-SES schools, college-linking networks improve the odds of attendance at two- and four-year colleges — although the effects are relegated to the individual level
- Peer effects manifest at both the individual and school level — although they are strongest at low- and middle-SES schools
  - ▣ Evidence from this study supports research that documents how “chain” effects can shape college decision-making

# Implications

- Continued emphasis on human capital investments in our nation's economic recovery is in good keeping with the saliency of academic preparation
- Investments in students' educational success, whether they originate from parents or other important influences, make a difference not only in the lives of individuals, but also within the larger organizational culture of a school
- Understanding the reciprocity between individuals and organizational systems encourages more deliberate action to combat the reproduction of social inequality
- More research is needed that focuses on when and how aspirations are formed, how best to involve parents, and which teaching and learning practices are most conducive to academic success in different SES environments

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