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Can High Schools Reduce College Enrollment Gaps With a New Counseling Model?

Jennifer L. Stephan

American Institutes for Research

James E. Rosenbaum

Northwestern University

Despite planning college, disadvantaged students are less likely to enroll in college, particularly 4-year colleges. Beyond cost and academic achievement, previous research finds that a lack of college-related social resources poses barriers. However, little research investigates whether schools can help. We examine whether, how, and for whom a new counseling model aimed at providing college-related social resources may improve college enrollment. Following nearly all seniors in Chicago Public Schools from senior year through the fall after high school, we find that coaches may improve the types of colleges that students attend by getting students to complete key actions. It is important that the most disadvantaged students appear to benefit. This research suggests that targeting social resources may improve the high-school-to-college transition for disadvantaged students.

Keywords: counseling, postsecondary education, social stratification

ALTHOUGH the opportunity to attend college has dramatically increased over recent decades, the college choice process continues to reinforce existing patterns of social stratification. Nearly all graduating seniors, irrespective of family income, race, or ethnicity, plan to attend college (Berkner & Chavez, 1997). However, disadvantaged students plan and enroll in 2-year or less selective colleges at higher rates (author's calculations using NELS), and these types of colleges are associated with lower educational attainment and earnings (Dougherty, 1994; Hoekstra, 2009; Long, 2008; Melguizo, 2008; Pascarella & Terenzini, 2005; Stephan, Rosenbaum, & Person, 2009). Most research focuses on college cost and academic achievement as explanations for differences in college enrollment by socioeconomic status (SES), but neither completely accounts for differences. Increases in financial aid do not always increase the college enrollment of disadvantaged students (Hansen, 1983; Kane, 1999; Mundel, 2008), and at every achievement level, low-SES students attend 4-year colleges at lower rates (Plank & Jordan, 2001).

Successfully navigating the complex and unpredictable procedures of 4-year college applications and financial aid requires students to make plans and take actions (Roderick, Nagaoka, Coca, & Moeller, 2008) that in turn depend on certain social resources, which we define as resources that students access through social interactions and which are distinct from academic or financial resources (e.g., college knowledge, assistance, and social support).¹ Lacking college-related social resources can pose barriers to 4-year colleges for disadvantaged students (Avery & Kane, 2004; Bloom, 2007; Lareau & Weininger, 2008; McDonough, 1997; Stephan, forthcoming). Although recent research documents SES differences in college-related social resources, almost none has considered whether and how schools may provide social resources

to improve college enrollment. This study examines a new model of college advising (the college coach program) designed to provide college-related social resources and analyzes whether, how, and for whom it may relate to reduced gaps in the college enrollment process.

Following nearly all graduating seniors in Chicago Public Schools (CPS) from senior year through the fall after high school, this research shows gaps in the enrollment process that previous research has rarely discussed. Then, using a difference-in-differences approach, we test whether the onset of the coach program is associated with subsequent changes in students' college actions and enrollment and whether, contrary to a typical finding of cumulative advantage (the rich get richer), it can benefit the most disadvantaged students.

In the remainder of this section, we review barriers in the enrollment process related to social resources, limitations in traditional approaches to assisting students, and how the college coach program attempts to overcome some of these constraints.

Barriers in the College Enrollment Process Related to Social Resources

American public schools have the ambitious goal of providing equal opportunity regardless of background. Although policymakers recognize the need to provide academic enrichment and financial aid, subtle barriers are often not recognized or addressed. Social support for college, college knowledge, and parental involvement in the enrollment process are social resources that influence students' college choices, and these resources are more accessible to middle-class families (González, Stoner, & Jovel, 2003; Pérez & McDonough, 2008; Perna, 2000; Plank & Jordan, 2001). Disadvantaged students are more likely to face social and personal risks in pursuing college (Bloom, 2007), and low-SES or minority students have less information about college cost (Grodsky & Jones, 2007; Kirst & Venezia, 2004), college requirements (Kirst & Venezia, 2004), and differences in institutional types and degrees (Stephan, Goble, & Rosenbaum, 2008; Stephan, Rosenbaum, & Person, 2009). Whereas the parents of low-SES students support their children's

educational aspirations generally (González et al., 2003; Lareau & Weininger, 2008; Stanton-Salazar, 2001), middle-class parents more often provide specific knowledge or help (Bloom, 2007; Kirst & Venezia, 2004; Lareau & Weininger, 2008; McDonough, 1997) and monitor the completion of key tasks (Lareau & Weininger, 2008; McDonough, 1997).

Alternate Models of Counseling: Can High Schools Provide College-Related Social Resources?

If families cannot provide college-related social resources, schools may be able to help, but students' needs are great and school resources limited. The average student to counselor ratio is high at urban high schools (318 to 1; Parsad, Alexander, Farris, & Hudson, 2003), and counselors' heavy workloads are often packed with non-counseling duties (Moles, 1991; Parsad et al., 2003; Powell, Farrar, & Cohen, 1985). Moreover, the standard counseling model may make it difficult to serve students with the greatest needs for help. In the standard model, counselors provide help one-on-one and at the request of students. Although this model may work in elite high schools, it is problematic when student-tocounselor ratios and student needs are both high. Low-SES students often require more detailed assistance, but counselors with large caseloads have little time to meet individually with students. Moreover, a model that requires student initiative can fail to reach disadvantaged students, who can be uncomfortable seeking or receiving help or may not know when they need help (Bloom, 2007; Stanton-Salazar, 2001; Stephan & Rosenbaum, 2009). Constraints on counselors coupled with the standard counseling model may result in many disadvantaged students being poorly served.

Pre-college outreach programs (e.g., Upward Bound, AVID, Puente) have developed to provide supplemental assistance, and some increase college-going, overall or for the most disadvantaged students (Gándara & Bial, 2001; Kahne & Bailey, 1999; Myers, Olsen, Seftor, Young, & Tuttle, 2004). Most outreach programs are broader in content and goals than high school counseling, and they typically use a wider variety of advising strategies (Gándara & Bial, 2001; Perna & Swail, 2001; Schultz & Mueller, 2006). However, these programs limit which students they serve. Unlike counselors who aim (although not always successfully) to serve all students, the vast majority of outreach programs select students based on SES or race/ ethnicity and often also on academic achievement or staff recommendations (Gándara & Bial, 2001; Schultz & Mueller, 2006). Outreach programs serve an important role for some students, but they are not an alternative to counseling. Another model may be necessary.

One promising model increasingly receiving attention is the "coaching" model. Although coaching programs differ, the approach typically assigns an advisor to a high school to work with school staff and assist students with the nonacademic tasks required to navigate the college enrollment process. One of the largest programs of this type, the National College Advising Corps, has expanded rapidly and currently has programs in 13 states. In 2008, former U.S. Senator Hillary Rodham Clinton (D-NY) proposed the COACH Act that would have created a similar program nationally (Simmons, 2011). Although Congress did not pass this legislation, its introduction attests to the widespread interest in a coaching approach. This article examines the effects of a program that uses full-time coaches, the Chicago Public Schools' college coach program, which appears to benefit students, especially those who are least advantaged.

The college coach program. In 2004–2005, CPS introduced the college coach program to a diverse group of 12 non-selective high schools. One coach was assigned per school and charged with improving students' college enrollment by providing help in the enrollment process (not academic or monetary assistance). The district encouraged coaches to focus on increasing student attendance at 4-year colleges (because of low graduation rates at local 2-year colleges) and focus on increasing key college actions that are particularly important for 4-year college enrollment: applying to multiple colleges, completing the Free Application for Federal Student Aid (FAFSA), and applying for scholarships. Although the district directs both

coaches and counselors to focus on the same goals, there are important differences, and the coach program suggests alternatives to many elements of traditional counseling.

First, coaches and counselors differ in their professional backgrounds. Public high school counselors are school professionals, and they often follow a psychological services model (McDonough, Ventresca, & Outcalt, 2000), which deals with students individually and at students' initiative. In contrast, coaches are hired largely because of their experience outside of schools working with disadvantaged youth, often in groups.

Second, coaches and counselors differ in job tasks. Unlike most counselors, coaches spend all of their time helping students with postsecondary plans. They organize formal college programming (e.g., college fairs, workshops, tours) and also provide ongoing assistance in a college room, a space stocked with computers that students visit during their lunch hour or before or after school to work on the enrollment process and that also serves as the coaches' office. Unlike counselors who report to the principal, coaches, during the study period, reported to the program director at the district level.

Third, coaches have innovative (relative to typical counselors) advising strategies: (a) Instead of relying on student-initiated contacts (when students are sometimes unsure that college is pertinent to them), coaches proactively reach out and engage students in the enrollment process. Coaches summon students to the college room, wait outside classrooms, send personalized notes, eat lunch in the students' lunchroom (which other staff avoid), and even approach students in detention (a neglected captive audience) to discuss students' future plans. (b) Coaches build trusting relationships with students, a potentially important precursor to serving harder-to-reach students (Kahne & Bailey, 1999; Stanton-Salazar, 2001), by demonstrating an interest in students (e.g., by attending after-school events), reducing their social distance to students, and being dependable and candid in their interactions. (c) Coaches enlist students to help each other in the enrollment process by using students' peer networks to deliver information or assistance and to recruit new students into activities. In some schools, this

is formalized in a peer counseling program. (d) Whereas counselors typically meet with students individually, coaches often *use groups*, both for formal activities (e.g., financial aid or essay writing workshops) and informally as students gather in the college room (Stephan, forthcoming).

Coaches' strategies create or enhance students' college-related social resources. By using groups and enlisting students' peers, coaches can foster social support among students for college, a potentially important resource for disadvantaged students (Bloom, 2007). Counselors who work one-on-one with students do not have as much opportunity to create peer support. Coaches' strategies also enable them to interact more frequently with students than most counselors. Through frequent interactions, coaches can provide detailed and ongoing college knowledge and assistance. For example, unlike many counselors who do not address financial aid or do so only minimally (McDonough & Calderone, 2006), coaches provide detailed information about financial aid, help students and families complete the FAFSA (including explaining confusing questions), often track FAFSA completion, and help students interpret aid award letters. Coaches also monitor completion of key tasks. In interviews, students repeatedly remarked on the multiple reminders (or nagging) that they received from coaches to complete application steps. Counselors who meet with students only a few times per year cannot provide much detailed help or monitoring. Finally, by reaching out to students and building trust, coaches may reach students who may not otherwise have sought out help (Stephan, forthcoming).

Ethnographic observation and interviews found that although coaches varied in personalities, some activities, and some tactics, all coaches focused on the completion of the same key actions (FAFSA, scholarship, and college applications), probably because the district monitored these actions. In interviews with nine coaches, two coach supervisors, and students at two coach high schools, interviewees reported that coaches used many of the same strategies (e.g., proactively reaching out, building trust, enlisting students in providing help, and using groups) and activities (e.g., college tours, hands-on help with the FAFSA, workshops on college application steps, hosting college representatives, advising students in a college room; Stephan, forthcoming). Observations over a 3-year period confirmed these reports (Naffziger, 2011). Coaches discussed "best practices" in monthly staff meetings, which supported this consistency.

Like counselors, coaches are based in schools, they aim to serve all students, and they attempt to improve the transition to college based on information and assistance (not by changing academic achievement or providing money). Like some outreach programs, coaches use advising strategies that differ from those of typical counselors. Counselors are trained in a psychological services model-serving students one-on-one and at their request. Coaches instead act like community organizers: Coaches proactively recruit students into the college enrollment process, use existing peer networks and create new ones to disseminate information and engage students, and serve students in groups. (See Naffziger, 2011, and Stephan, forthcoming, for detailed qualitative analyses of the coach program and its processes.)

Method

Data

This study uses data from CPS provided by the Consortium on Chicago School Research. Student data come from four cohorts (2004-2007) of all CPS graduating seniors and include demographics, ACT scores, transcripts, responses to a senior exit survey administered in May, and actual college enrollment collected by the National Student Clearinghouse (NSC). Barron's Profiles (2006) are used to classify college selectivity. The analytic sample excludes students who did not respond to the senior exit survey (response rates were 85% in 2004 and more than 97% in 2005–2007) and students at four types of schools: at charter schools, because achievement data are not available for them; at magnet schools, because unlike coach schools, they have selective enrollment; at schools that were opened or closed during the study period, to avoid issues related to restructuring; and at one coach school with no survey data for 2004. The analytic sample has 44.627 students from 58 schools.

Analytic Approach

The coach program was not designed as an experiment. Although coach schools do not differ systematically from non-coach schools on many measured characteristics (see Appendix A), coaches were not randomly assigned to schools. The program required schools to have space for a college room (many schools had space). It did not require schools to provide any resources, and it did not target any particular type of school. The program head sought to assign coaches to a wide variety of schools. Indeed, coach schools were distributed fairly evenly across high schools in terms of socioeconomic composition, racial composition, and academic achievement. Nonetheless, coach and non-coach schools could differ systematically in unmeasured ways. This analysis uses three procedures to reduce potential selection bias: a difference-in-differences design, controls for changes in the student composition of high schools over time, and controls for preprogram trends in college enrollment. Although statistically significant findings cannot be regarded as causal, they rule out some possible alternate interpretations and may suggest relationships worth further investigation with more rigorous methods.

Using a difference-in-differences approach, we compare changes in college enrollment rates before and after program implementation at coach schools to the change at non-coach schools over the same time interval. This approach accounts for pre-program differences in coach and non-coach schools (in 2004) and any districtwide changes in college enrollment rates over the study period. The estimator is the coefficient associated with a dummy variable indicating whether a student attended a coach school after the onset of the program controlling for year and high school fixed effects.

A potential problem would arise, however, if there were differential changes in student body composition over time favoring coach schools. To control for this possibility, we add regression controls for many student characteristics important in college choice: race/ethnicity, gender, cumulative grade point average (GPA; measured in fall of senior year), ACT composite score, neighborhood social status and poverty, number of vocational and advanced placement (AP) classes taken in fall of senior year, and participation in college prep programs (Upward Bound and district postsecondary programs).

Finally, coach and non-coach schools could potentially have had different trends in college enrollment prior to program implementation. If college enrollment rates were rising at coach schools prior to the onset of the program, this trend would be expected to continue and result in an enrollment increase between 2004 and 2005– 2007 even without the coach program. To construct the trend variable, college enrollment was regressed on year for each high school separately using data from 2001 through 2004, and the coefficient associated with year (the estimated linear trend) was recorded. The trend variable is the product between the estimated slope and year, which varies across high schools.

The aggregate model predicts an outcome for student *i* in school *s* in year *t* based on individual characteristics, attending a coach school after program implementation (the interaction between coach school and post-treatment period), year fixed effects, and a school-level linear trend in college enrollment based on pre-program data (to control for possible pre-existing trends). Since the models have dichotomous dependent variables, fixed effects logistic regression (also known as conditional logistic regression) was used to estimate models that control for school fixed effects (see Allison, 2005, for a detailed discussion of the technique).² This statistical approach controls for all (observable and unobservable) time-invariant school-level characteristics, changes in observable student characteristics, district-wide trends in enrollment over time, and differences in enrollment trends prior to implementation for coach and non-coach schools. Although studying just one school district results in some loss of generalizability, some internal validity is gained because doing so controls for district and state-level factors (e.g., college tuition and various policies) typically not controlled in national studies. Time-varving changes in unmeasured school characteristics that favor coach schools remain a threat to internal validity. but given the multiple factors accounted for, this threat may be low.

Although fixed effects reduce bias in the estimation of treatment effects, this approach typically leads to relatively higher standard errors because it ignores between-unit variation (Allison, 2005). For this reason, we note when coefficients are borderline statistically significant, which is noteworthy more than usual.

College Selectivity

This study uses Barron's rankings (Barron's Profiles, 2006) to classify colleges by selectivity. Four-year colleges are classified as more selective (a Barron's ranking of very, highly, or most competitive), less selective (a ranking of non-competitive, less competitive, or competitive), or unrated or special (e.g., art schools). Among the institutions attended by CPS graduates, institutional graduation rates are lowest for 2-year colleges (24.6%), higher for less selective 4-year colleges (35.0% to 49.2%), and highest for more selective 4-year colleges (63.9% to 88.6%). Just 7% of CPS graduating seniors who plan college enroll in more selective 4-year colleges. Appendix B lists the three most frequently attended colleges for CPS students by Barron's ranking.

Missing Data

Rates of missing data on independent variables were relatively low: 13% missing for ACT scores (all juniors in Illinois take the ACT), 4% for transcripts (used for GPA and the number of AP and vocational classes), and 0.3% for neighborhood poverty and social status. Among students with general college plans, less than 4% are missing college actions. These missing values were replaced with mean values and dummy variables were added to the regressions to indicate a missing value.

For indicators of college enrollment, CPS matches student records of graduates to the NSC database, which collects enrollment information from more than 3,300 colleges (NSC, 2009). Student records that match indicate a student enrolled in college. The vast majority of students without an NSC record are not enrolled in college, but others could be enrolled in non-participating institutions. Non-enrollment cannot be distinguished from enrollment that is missing because a student attended a non-participating institution. First, just 9% of students who reported specific plans in the spring of senior year planned to attend a non-participating

institution, so missing enrollment is likely rare. Second, of students who planned a non-participating institution, 63% planned to attend a for-profit institution and an additional 10% planned to attend a private institution that was previously a for-profit institution. Despite evidence that for-profit or private 2-year colleges have some advantages relative to community colleges (Bailey, Badway, & Gumport, 2001; Rosenbaum, Deil-Amen, & Person, 2006; Stephan et al., 2009), the district doubts the benefits of these institutions and may not count attending a for-profit college as a successful enrollment.

Imputing values for missing data and enrollment for students who stated plans to enroll in a non-participating institution does not change conclusions about the relationship between coaches and enrollment outcomes.

Results

Description of CPS Students and Their College Enrollment

Chicago Public Schools graduating seniors are primarily African American (52%) and Latino (34%; see Table 1), low-income (92% receive free/reduced price lunch), and below average academic achievers (89% score below the state average on the ACT). Despite financial and academic barriers, in the spring of senior year, 80% of graduating seniors plan to enroll in college in the fall (general college plans). However, almost half (47%) of students with general college plans do not actually enroll in the fall after high school; another 20% enroll at 2-year colleges, and 33% at 4-year colleges. Just 7% enroll at more selective 4-year colleges.

Two Gaps in the Enrollment Process

Although most research focuses on the difference between students' college plans and their enrollment (however, see Roderick et al., 2008), this study finds two gaps in the enrollment process: one gap between general and specific plans and another between specific plans and enrollment. Although 80% of graduating CPS seniors stated a general plan to enroll in college in the fall, just 62% of students with general college plans named a specific college they planned to attend at the end of senior year

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Summary of Sample and Key Variables for Graduating Seniors (2004–2007)	_
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	Aggregate	American	Latino	Asian	White/other	Lower SES	Higher SES	No AP classes	1+ AP classes
	(n = 44, 627)	(n = 23, 303)	(n = 15,208)	(n = 1, 870)	(n = 4, 246)	(n = 23, 127)	(n = 21,500)	(n = 31, 327)	(n = 11, 391)
Race/ethnicity									
African American	52%	100%	0%0	0%0	0%0	43%	62%	56%	42%
Latino	34%	%0	100%	0%0	0%0	48%	19%	33%	36%
Asian	4%	%0	0%0	100%	0%0	3%	9%9	3%	9%6
White/other	10%	0%	0%0	0%	100%	6%9	14%	8%	14%
Receive free or reduced price lunch	92%	93%	94%	%06	74%	95%	88%	93%	88%
ACT score at or above state average (ACT = 20.3)	11%	8%	10%	32%	30%	9%	14%	78%	30%
Planning college in fall after senior year	80%	84%	74%	%06	79%	78%	83%	76%	89%
Among those planning college in fall	(n = 35, 777)	(n = 19,594)	(n = 11, 170)	(n = 1,652)	(n = 3,361)	(n = 17,931)	(n = 17, 846)	(n = 24, 521)	(n = 10, 126)
Actions completed by end of senior year									
Completed at least 1 college application	85%	88%	29%	88%	82%	84%	85%	82%	92%
Completed 3 or more college applications	47%	54%	37%	50%	40%	45%	49%	43%	60%
Completed financial aid form (FAFSA)	64%	72%	51%	72%	60%	61%	67%	60%	75%
Applied to at least 1 scholarship	53%	61%	44%	47%	43%	52%	54%	48%	67%
Received at least 1 scholarship	23%	26%	18%	21%	24%	21%	25%	19%	33%
Specific college planned by end of senior year									
2-yr college	19%	17%	24%	14%	20%	21%	17%	22%	12%
Less selective 4-yr college	29%	34%	20%	34%	24%	26%	32%	25%	39%
More selective 4-yr college	9%6	8%	7%	23%	17%	7%	11%	4%	22%
Special/unranked 4-yr college	5%	6%	6%	2%	4%	6%	5%	6%	4%
No specific college named	38%	36%	44%	26%	35%	40%	36%	43%	23%
College enrollment in fall after senior year									
2-yr college	20%	20%	20%	20%	25%	20%	20%	23%	13%
Less selective 4-yr college	24%	28%	17%	33%	24%	21%	28%	20%	36%
More selective 4-yr college	7%	6%	5%	21%	15%	5%	6%	2%	19%
Special/unranked 4-yr college	2%	2%	2%	1%	1%	2%	2%	2%	2%
Not enrolled	47%	45%	56%	25%	36%	52%	41%	53%	29%
Among those with specific college plans	(n = 22, 272)	(n = 12,588)	(n = 6, 281)	(n = 1, 230)	(n = 2, 173)	(n = 10, 833)	(n = 11, 439)	(n = 14,018)	(n = 7,757)
College enrollment in fall after senior year									
2-yr college	19%	18%	19%	15%	22%	19%	18%	23%	11%
Less selective 4-yr college	32%	35%	25%	38%	29%	28%	36%	28%	41%
More selective 4-yr college	11%	8%	9%6	27%	22%	8%	13%	3%	24%
Special/unranked 4-yr college	2%	2%	2%	1%	1%	2%	2%	2%	2%
Not enrolled	37%	37%	45%	19%	25%	43%	32%	44%	22%

Note. SES = socioeconomic status; AP = advanced placement; FAFSA = Free Application for Federal Student Aid.

(Table 1). Furthermore, 37% of students with a specific plan to enroll in the fall did not enroll in any college 4 months later. Not completing key college actions may in part explain these gaps. Among students with general college plans, 15% did not apply to any college by the end of senior year; 47% did not complete a scholarship application (even though some scholarships have no academic requirements); and 36% of students did not complete the FAFSA, although nearly all would qualify (92% of students receive free/ reduced price lunch). Specific college plans do not flow automatically from general plans, and having specific plans does not guarantee enrollment. These gaps in the application process vary by student characteristics: Latino, lower SES, and non-AP students have bigger gaps (Table 1).

In sum, although most students plan to attend college, many do not take key college actions or form specific plans by the end of senior year. If coaches are going to improve college attendance, they may need to address these intervening actions. Indeed, the district encourages coaches, as well as counselors, to increase the number of students completing key actions, and as discussed earlier, coaches have strategies that appear to allow them to do so.

Comparing Changes Over Time at Coach Versus Non-Coach Schools

As a first step in examining the coach program, this analysis compares changes in coach versus non-coach schools before and after program implementation. The school district has increasingly focused on improving postsecondary outcomes, which is reflected in some mean changes in non-coach schools (see Table 2). In non-coach schools, among students with general plans, enrollment in any college and in 4-year (less selective) colleges increased after 2004 (by 1.9 and 1.1 percentage points, respectively), and 2-year college enrollment decreased by 0.9 percentage points. Over the same period, coach schools showed even greater gains for some outcomes compared with these district-wide trends. Compared with non-coach schools, college enrollment increased more at coach schools (an additional 1.7 percentage points); enrollment at 4-year colleges (less selective) increased by an additional 3.5 percentage points, and enrollment at 2-year colleges fell by slightly more (an additional 0.3 percentage points). Enrollments at more selective 4-year colleges, however, dropped somewhat more at coach schools than at noncoach schools (-1.0 and -0.3 percentage points, respectively). In these raw comparisons, which ignore changes in school composition, enrollment outcomes appear to have improved at coach schools relative to non-coach schools except at more selective 4-year colleges, a small but important segment (discussed later).

Coaches emphasize key actions and the formation of specific plans as important steps in converting general plans into enrollment. Relative to a substantial 3.7 percentage point gain in completing three or more college applications in non-coach schools, applications at coach schools increased by an additional 4.7 percentage points, and FAFSA completion increased by 2.6 percentage points more at coach schools. Despite a general decline in students forming specific plans (9.6 percentage points in non-coach schools, likely due to discouraging community college plans), this decline was substantially less (4.1 percentage points less) in coach schools.

These differences, however, do not control for changes in school composition. Although achievement and SES changed little, the proportion of Latinos increased more in coach schools (2.5 percentage points more), which, given Latinos' gaps in the enrollment process, may have posed greater challenges to coaches.

Estimating the Relationship Between Attending a Coach School and College Enrollment Using Fixed Effects Logistic Regression

Focusing on the 80% of seniors with general college plans (n = 35,777), regressions predict students' enrollment outcomes controlling for student characteristics, pre-program school trends in college enrollment, school and year fixed effects, and attending a coach school after program implementation (see Table 3). Relative to White/Other students, African Americans are more likely to enroll in college, in less selective 4-year colleges versus 2-year colleges, and in more selective 4-year colleges. This "net Black advantage" has been well documented (Bennett & Lutz, 2008; Bennett & Xie, 2003). Latinos

$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		Stude	Students at coach schools	schools	Students	Students at non-coach schools	h schools	
83.4% 81.7% -1.7% 80.9% 79.2% -1.7% 83.4% 81.7% -1.7% 80.9% 79.2% -1.7% 43.7% 40.2% -3.6% 50.2% 48.3% -1.9% 18.4% 17.2% -1.2% 50.2% 48.3% -1.9% -1.9% 23.7% 12.7% -1.2% 22.0% 48.3% -1.9% -1.9% 23.7% 12.7% -1.2% 22.2% 4.9% 21.1% -1.9% 0.5% 13.7% 0.1% 22.2% 4.9% -1.9% 0.5% 0.1% 2.2% 4.9% 2.2% -1.9% 43.5% 51.8% 3.3% 43.6% 47.3% 2.19% -1.2% 43.5% 51.8% 53.3% 43.6% 47.3% 2.19% -1.9% 64.6% 55.2% 49.5% 52.9% 21.6% -1.2% 26.9% 55.3% 56.9%		2004	2005-2007	Difference	2004	2005-2007		Coach difference – non-coach difference
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	% with general college plans	83.4%	81.7%	-1.7%	80.9%	79.2%	-1.7%	0.0%
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Enrollment among students with general plans							
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	% who did not enroll	43.7%	40.2%	-3.6%	50.2%	48.3%	-1.9%	-1.7%
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	% who enrolled in ≤2-yr college	18.4%	17.2%	-1.2%	22.0%	21.1%	-0.9%	-0.3%
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	% who enrolled in less selective 4-yr college	23.7%	28.2%	4.5%	22.4%	23.5%	1.1%	3.5%
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	% who enrolled in more selective 4-yr college	13.7%	12.7%	-1.0%	5.2%	4.9%	-0.3%	-0.7%
I plans 43.5% 51.8% 8.3% 43.6% 47.3% 3.7% 64.6% 68.5% 3.9% 61.7% 63.1% 1.3% 51.8% 55.2% 3.5% 49.5% 53.6% 4.1% 26.5% 26.0% -0.5% 22.9% 51.6% -1.2% 70.8% 65.3% -0.5% 22.9% 58.5% -9.6% 70.8% 65.3% -0.5% 22.9% 58.5% -0.1% 70.8% 65.3% -0.5% 22.9% 58.5% -0.1% 70.8% 65.3% -0.5% 22.9% 58.5% -0.1% 6.7% 5.9% -0.3% 58.9% -0.1% -0.1% 6.7% 5.9% -0.8% 3.8% 4.2% 0.1% 6.7% 5.9% -0.7% 0.1% 0.1% 0.1% 7.3 177 0.0 0.3 0.0 0.1% 6.9% 8.0% 1.1% 5.8% -1.5% 0.0 0.1 0.1 0.3 0.3 0.0 0.1%	% who enrolled in unrated/special 4-yr college	0.5%	1.8%	1.3%	0.1%	2.2%	2.1%	-0.8%
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	College actions and specific plans among students with general	d l						
FSA 64.6% 68.5% 3.9% 61.7% 63.1% 1.3% east 1 scholarship 51.8% 55.2% 3.5% 49.5% 53.6% 4.1% more scholarships 26.5% 26.0% -0.5% 22.9% 21.6% -1.2% among students 70.8% 65.3% -0.5% 22.9% 21.6% -1.2% 67% 55.3% -0.5% 22.9% 53.6% -0.1% 6.7% 5.9% -0.3% 56.9% 56.8% -0.1% 6.7% 5.9% -0.3% 56.9% 56.8% -0.1% 6.7% 5.9% -0.3% 56.9% 56.8% -0.1% 6.7% 5.9% -0.3% 56.9% 56.8% -0.1% 6.7% 5.9% -0.7% 0.1% 0.4% 6.7% 5.9% -0.7% 20.6% 29.7% -1.5% 6.7% 5.9% -0.7% 0.0 0.1% 0.1% 59.2% 5.84% -0.7% 20.9% 5.8% -1.5% 512 5.9% 0.0 0.1 0.1 0.1 512 5.8% 0.0 0.3 0.0 512 5.8% 0.0 0.1% 0.1% 512 1.77 0.5 15.8 16.1 0.4 512 1.1% 0.2 1.1% 0.0 0.0 512 2.6% 2.6% 2.6% 0.0 1.1% 0.0 0.0 2.6% 0.0 512 <td>% who applied to 3 or more colleges</td> <td></td> <td>51.8%</td> <td>8.3%</td> <td>43.6%</td> <td>47.3%</td> <td>3.7%</td> <td>4.7%</td>	% who applied to 3 or more colleges		51.8%	8.3%	43.6%	47.3%	3.7%	4.7%
east 1 scholarship 51.8% 55.2% 3.5% 49.5% 53.6% 4.1% more scholarships 26.5% 26.0% -0.5% 22.9% 21.6% -1.2% among students 70.8% 65.3% -5.5% 68.0% 58.5% -9.6% 49.5% 53.6% -0.3% 56.9% 58.5% -9.6% 6.7% 5.9% -0.3% 56.9% 58.8% -0.1% 6.7% 5.9% -0.3% 56.9% 58.8% -0.1% 6.7% 5.9% -0.3% 56.9% 58.8% -0.1% 6.7% 5.9% -0.3% 56.9% 58.8% -0.1% 6.7% 5.9% -0.3% 56.9% 58.8% -0.1% 6.7% 5.9% -0.3% 2.6% 29.6% 29.6% 6.7% 59.2% -0.7% 0.0 0.1% 6.7% 59.2% -0.7% 0.0 0.1% 59.2% 58.4% -0.7% 0.1% 0.1% 59.2% 58.4% -0.7% 20.6% 29.6% 59.2% 58.4% -0.7% 0.1% 0.1% $51A$ (fall senior year) 2.8 2.8 0.0 2.6 2.6 1.77 0.5 1.1% 0.6 2.6 0.0 1.7% 0.0 0.0 2.6 0.0 1.7% 0.0 0.0 2.6 0.0 1.7% 0.0 0.0 0.0 1.7% 0.0 2.6 2.6% <td>% who completed FAFSA</td> <td>64.6%</td> <td>68.5%</td> <td>3.9%</td> <td>61.7%</td> <td>63.1%</td> <td>1.3%</td> <td>2.6%</td>	% who completed FAFSA	64.6%	68.5%	3.9%	61.7%	63.1%	1.3%	2.6%
more scholarships 26.5% 26.0% -0.5% 22.9% 21.6% -1.2% among students 70.8% 65.3% -5.5% 68.0% 58.5% -9.6% 49.5% 65.3% -5.5% 68.0% 58.5% -9.6% 49.5% 49.3% -0.3% 55.9% 58.5% -0.1% 6.7% 5.9% -0.3% 56.9% 56.9% 56.9% -0.1% 6.7% 5.9% -0.3% 58.9% -0.1% 0.4% 6.7% 5.9% -0.3% 25.9% 29.6% -0.1% 6.7% 59.2% -0.7% 0.7% 29.7% 0.4% 59.2% 59.0% 2.6% 29.6% 0.1% 0.4% 51.4% 0.7% 2.0% 2.0% 0.1% 0.0 51.4% 0.1 0.0 0.0 0.0 0.0 0.0 51.4% 0.1 0.0 0.0 <	% who applied to at least 1 scholarship	51.8%	55.2%	3.5%	49.5%	53.6%	4.1%	-0.6%
among students 70.8% 65.3% -5.5% 68.0% 58.5% -9.6% 49.5% 49.3% -0.3% 56.9% 56.8% -0.1% 6.7% 5.9% -0.3% 56.9% 56.8% -0.1% 6.7% 5.9% -0.8% 3.8% 4.2% 0.4% 6.7% 5.9% 2.6% 29.6% 29.7% 0.1% 59.2% 58.4% -0.7% 0.1% 0.1% 0.1% 59.2% 58.4% -0.7% 0.0 0.1% 0.1% 59.2% 58.4% -0.7% 0.1% 0.1% 0.1% 59.2% 58.4% -0.7% 0.1% 0.1% 59.2% 58.4% -0.7% 0.0 0.1% 59.2% 58.4% -0.7% 0.0 0.1% $51A$ (fall senior year) 2.8 2.6 0.0 2.6 2.6 17.3 17.7 0.5 15.8 16.1 0.4 1.0% 1.0% 0.0 2.6 2.6 0.0 1.0% 1.1% 1.1% 1.1% 0.0 1.0% 1.1% 1.1% 1.1% 0.0	% who received 1 or more scholarships	26.5%	26.0%	-0.5%	22.9%	21.6%	-1.2%	0.8%
$ \begin{array}{llllllllllllllllllllllllllllllllllll$	% with specific plans among students	70.8%	65.3%	-5.5%	68.0%	58.5%	-9.6%	4.1%
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Student characteristics							
6.7% $5.9%$ $-0.8%$ $3.8%$ $4.2%$ $0.4%$ scial status $33.4%$ $36.0%$ $2.6%$ $29.6%$ $29.7%$ $0.1%$ scial status -0.1 -0.2 0.0 -0.3 0.0 sverty $-0.7%$ $61.4%$ $59.8%$ $-1.5%$ overty 0.1 -0.2 0.0 -0.3 0.0 overty 0.1 0.1 0.0 -0.3 0.0 overty 0.1 0.1 0.0 -0.3 0.0 or triposite score 17.3 17.7 0.5 15.8 16.1 onulative GPA (fall senior year) 2.8 2.8 0.0 2.6 0.0 tripoted in Upward Bound $6.9%$ $8.0%$ $1.1%$ $7.2%$ $8.3%$ $1.1%$	% African American	49.5%	49.3%	-0.3%	56.9%	56.8%	-0.1%	-0.1%
33.4% 36.0% 2.6% 29.6% 29.7% 0.1% cial status 59.2% 58.4% -0.7% 61.4% 59.8% -1.5% verty -0.1 -0.2 0.0 -0.3 0.0 overty 0.1 0.0 -0.3 0.0 overty 0.1 0.0 -0.3 0.0 or tromposite score 17.3 17.7 0.5 15.8 16.1 imulative GPA (fall senior year) 2.8 2.8 0.0 2.6 0.0 tricipated in Upward Bound 6.9% 8.0% 1.1% 7.2% 8.3% 1.1%	% Asian	6.7%	5.9%	-0.8%	3.8%	4.2%	0.4%	-1.2%
59.2%58.4% -0.7% 61.4% 59.8% -1.5% ocial status -0.1 -0.2 0.0 -0.3 0.0 overty 0.1 0.1 0.1 0.0 0.3 0.0 overty 0.1 0.1 0.1 0.0 0.3 0.0 or tromposite score 17.3 17.7 0.5 15.8 16.1 0.4 imulative GPA (fall senior year) 2.8 2.8 0.0 2.6 0.0 tricipated in Upward Bound 6.9% 8.0% 1.1% 7.2% 8.3% 1.1%	% Latino	33.4%	36.0%	2.6%	29.6%	29.7%	0.1%	2.5%
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	% Female	59.2%	58.4%	-0.7%	61.4%	59.8%	-1.5%	0.8%
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Average social status	-0.1	-0.2	0.0	-0.3	-0.3	0.0	-0.1
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Average poverty	0.1	0.1	0.0	0.3	0.3	0.0	0.0
2.8 2.8 0.0 2.6 2.6 0.0 6.9% 8.0% 1.1% 7.2% 8.3% 1.1%	Average ACT composite score	17.3	17.7	0.5	15.8	16.1	0.4	0.1
6.9% 8.0% 1.1% 7.2% 8.3% 1.1%	Average cumulative GPA (fall senior year)	2.8	2.8	0.0	2.6	2.6	0.0	0.0
	% who participated in Upward Bound	6.9%	8.0%	1.1%	7.2%	8.3%	1.1%	0.0%
programs 16.6% 16.2% -0.4% 17.9% 14.6% -5.3%	% who participated in district postsecondary programs	16.6%	16.2%	-0.4%	17.9%	14.6%	-3.3%	2.9%

Note. FAFSA = Free Application for Federal Student Aid; GPA = grade point average.

Students' Enrollment, Plans, Actions, and Characteristics: Coach and Non-Coach Schools Before and After Program Implementation

TABLE 2

	Enrolled in college vs. not enrolled	2-yr college vs. not enrolled	Less selective 4-yr college vs. 2-yr	More vs. less selective 4-yr college
	(n = 35,777)	(<i>n</i> = 23,944)	(<i>n</i> = 15,961)	(<i>n</i> = 11,247)
	OR	OR	OR	OR
	(SE)	(SE)	(SE)	(SE)
Coach School × Post-	1.13 [†]	1.08	1.24*	0.82
Implementation	(0.07)	(0.09)	(0.13)	(0.11)
African American	1.42***	0.86*	3.49***	1.30*
	(0.08)	(0.06)	(0.30)	(0.15)
Asian	1.48***	1.30**	1.56***	0.94
	(0.11)	(0.12)	(0.16)	(0.11)
Latino	0.69***	0.62***	1.43***	1.19
	(0.03)	(0.04)	(0.11)	(0.13)
Female	0.99	1.05†	0.88**	0.81***
	(0.02)	(0.03)	(0.03)	(0.05)
Social status	1.10***	1.07**	1.13***	1.05
Source Startas	(0.02)	(0.03)	(0.04)	(0.05)
Poverty	1.00	0.99	1.06	1.00
loverty	(0.02)	(0.03)	(0.04)	(0.05)
ACT score	1.09***	1.00	1.21***	1.14***
	(0.01)	(0.01)	(0.01)	(0.01)
Cumulative GPA	2.04***	1.17***	3.27***	3.41***
Cumulative Offi	(0.04)	(0.03)	(0.12)	(0.19)
# of AP classes	1.04**	0.89***	1.13***	1.21***
	(0.02)	(0.02)	(0.03)	(0.03)
# of vocational classes	0.98	1.00	0.95*	0.99
of vocational classes	(0.01)	(0.02)	(0.02)	(0.04)
Upward Bound	1.27***	1.05	1.47***	1.22*
opward Dound	(0.06)	(0.06)	(0.10)	(0.12)
District postsecondary	1.06 [†]	1.01	1.00	1.26***
program	(0.04)	(0.04)	(0.05)	(0.08)
Year = 2005	1.08*	1.03	0.99	0.83 [†]
10di 2005	(0.04)	(0.05)	(0.06)	(0.08)
Year = 2006	1.00	1.00	0.87*	0.91
1001 2000	(0.04)	(0.05)	(0.05)	(0.09)
Year = 2007	1.10*	1.05	1.00	0.70**
1001 2007	(0.05)	(0.05)	(0.07)	(0.08)
School enrollment trend	0.65	0.56	1.53	0.55
(2001–2004)	(0.27)	(0.29)	(1.00)	(0.57)
(2001-2004)	(0.27)	(0.29)	(1.00)	(0.57)

TABLE 3 Fixed Effects Logistic Regression of College Enrollment on Coach Program and Student Characteristics

Note. Omitted race/ethnicity category is White/other. OR = odds ratio; SE = standard error; GPA = grade point average; AP = advanced placement.

 $^{\dagger}p < .10. \ ^{\bullet}p < .05. \ ^{\ast\ast}p < .01. \ ^{\ast\ast\ast}p < .001.$

are less likely to enroll in college compared to White/other students, but among those who do enroll, they are more likely to enroll in 4-year (less selective) colleges, controlling for other background characteristics. Females are as likely as males to enroll in college but less likely to enroll in 4-year colleges.

Like previous research, results show that improving academic achievement is critical for improving enrollment outcomes for disadvantaged

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students. Grade point average is a positive predictor of enrolling in college, in a 4-year (less selective) college, and in a more selective 4-year college. Other measures of academic achievement (ACT score and number of AP classes) positively predict all outcomes except enrolling in a 2-year college (vs. not enrolling).

Some measures of SES matter for some enrollment outcomes. The social status of a student's neighborhood (occupation and education status of adults in a student's residential block group) relates positively to enrolling in college and enrolling in less selective 4-year colleges (vs. 2-year colleges). However, it is not a significant predictor of the selectivity of 4-year college. Neighborhood poverty rate is not a significant predictor of any outcome.

Do schools matter beyond individual characteristics? Over the study period, the district encouraged all schools to improve college enrollment, especially attending 4-year colleges (vs. 2-year). Although college enrollment increased district-wide in 2005 and 2007 (vs. 2004), the increase was not uniform, and there was a significant decline in less selective 4-year enrollment (vs. 2-year) in 2006 and in more selective 4-year enrollment (vs. less selective 4-year) in 2007.

Given the district-wide emphasis on these goals, does the coach program have an additional effect? Attending a coach school was associated with a 13% increase in the odds of attending college and a 24% increase in attending a less selective 4-year college (vs. 2-year college; Table 3). As noted, while encouraging 4-year college attendance, the district discouraged 2-year college attendance, and indeed, attending a coach school is not related to 2-year college enrollment. Consistent with the program goals, students at coach schools were more likely to enroll at 4-year colleges (less selective) and may also have been more likely to enroll in college overall (borderline significant).

On the other hand, we find no significant relationship between attending a coach school and enrolling in a more (vs. less) selective 4-year college. During this period, the coach program did not focus on increasing selective 4-year college attendance.³ Although attending a more selective 4-year college is an important outcome, very few CPS students qualify to attend one (Roderick et al., 2008), and just 7% of CPS graduates with general college plans enroll in one (discussed below).

Processes Mediating Coach Effects

The district instructs schools to improve college enrollment by getting students to complete college and scholarship applications and financial aid forms. Coaches' methods for accomplishing these goals differ, however, from counselors' methods. By guiding groups of students in the enrollment process, coaches create social support for the enrollment process and are able to provide detailed and ongoing help and monitoring of task completion. This may increase the completion of college actions, which may improve college enrollment outcomes.

Results show that the odds of completing three or more college applications were 20% higher for students attending coach schools and the odds of completing the FAFSA were 17% higher, significant at <.01 and .02, respectively (see Table 4, columns 1–2). Students in coach schools were also 19% more likely to form specific plans (p = .01), a relationship that becomes insignificant after controlling for college actions (Table 4, columns 5–6). These results suggest that coaches may help students convert general college plans into specific plans by getting students to complete two college actions (three or more applications and the FAFSA).

Turning to enrollment outcomes, we find that, controlling for specific plans, these actions predict all enrollment outcomes (Table 4, columns 7–10). Together, actions and specific plans account for the relationship between coaches and enrollment outcomes (attending a coach school no longer has a significant relationship with less selective 4-year college enrollment after actions and plans are added; Table 4, column 9). Overall, attending a coach school predicts the completion of two key actions (applications and FAFSA), which may explain the relationship between attending a coach school and enrolling in a 4-year (less selective) college.

	(1)	(2)	(3)	(4)	(5)	(9)	(2)	(8)	(6)	(10)
	Applied to 3+ colleges	Completed FAFSA	Applied to 1+ scholarships	Received 1+ scholarships	Specific college planned	Specific college planned	Enrolled in college vs. not enrolled	2-yr college vs. not enrolled	Less selective 4-yr vs. ≤ 2-yr college	More vs. less selective 4-yr college
	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR
	(<i>SE</i>)	(SE)	(SE)	(SE)	(SE)	(<i>SE</i>)	(SE)	(SE)	(<i>SE</i>)	(<i>SE</i>)
	(n = 34, 651)	(n = 34,558)	(n = 34,532)	(n = 34, 439)	(n = 35, 761)	(n = 35, 761)	(n = 35,777)	(n = 23,944)	(n = 17,252)	(n = 11, 679)
Coach School × Post-	1.20**	1.17*	0.94	1.02	1.19**	1.12	1.04	1.03	1.15	0.83
Implementation	(.08)	(.08)	(90)	(.07)	(.08)	(.08)	(.07)	(.08)	(.12)	(.11)
Applied to 3 or more						2.31^{***}	1.37^{***}	1.20^{***}	1.33 * * *	1.33 * * *
colleges						(90)	(.04)	(.04)	(.05)	(.08)
Completed FAFSA						2.40^{***}	2.70***	1.86^{***}	2.43***	1.67^{***}
						(90)	(.07)	(90.)	(.12)	(.18)
Completed at least 1						1.38^{***}	0.91^{**}	0.84^{***}	1.22^{***}	1.12
scholarship						(.04)	(.03)	(.03)	(.05)	(.08)
Received at least 1						1.42^{***}	0.98	0.82^{***}	1.10^{*}	1.50^{***}
scholarship						(.05)	(.03)	(.04)	(90)	(60.)
Had a specific college							1.51^{***}	1.15^{***}	2.01^{***}	1.39^{**}
plan							(.04)	(.04)	(60.)	(.14)

TABLE 4 Fixed Effects Logistic Regressions of Actions, Plans, and Enrollment on Coach Program ī Å. postsecondary programs, year fixed effects, and a high school trend in college enrollment. OR = odds ratio; SE = standard error; FAFSA = Free Application for Federal Student Aid. $^{+}p < .10$. $^{*}p < .05$. $^{**}p < .01$. Not

Does the Coach Program Contribute to Cumulative Advantage?

Often, universal interventions create a "cumulative advantage": They widen gaps between privileged and disadvantaged students (Ceci & Papierno, 2005). For example, an analysis of Sesame Street's effects on children's cognitive development suggests that it widened the gap between low- and middle-SES children because of differences in viewing habits (Cook, 1975). Coaches are meant to serve all students, and they hoped to serve disadvantaged students who were less well served by the ordinary process. Can coaches benefit students not typically reached by counselors? Can coaches also reduce gaps in enrollment between relatively advantaged and disadvantaged students? Coaches seek to increase students' access to college expertise by proactively reaching out to students, building trusting relationships with students, and enlisting students in delivering help (Stephan, forthcoming). These strategies may allow coaches to serve students who otherwise would not seek out help. This analysis asks whether traditionally underserved students (Latino, lower SES, and non-AP students, and students at low college-planning high schools, defined as schools with a below median percentage of students stating college plans in spring 2004) may benefit from the program and whether they may benefit relatively more.

Results suggest that students often underserved by counselors may benefit from attending a coach school. Latino students, lower SES students, non-AP students, and students at low college-planning high schools are more likely to enroll in less selective 4-year versus 2-year colleges if they attended a coach school (odds ratios [ORs] of 1.86, 1.71, 1.35, and 1.56, respectively; see Table 5). The odds ratios associated with the coach program for these underserved groups are statistically significant, and they are of large magnitude. Non-AP students at coach schools may also be more likely to enroll in college (OR = 1.16, p = .06). On the other hand, there are no significant positive relationships between coaches and enrollment outcomes for many students with typically better enrollment outcomes: White, African American, higher SES, and AP students. However, among African American students, lower SES youths may be more likely to enroll in a less selective 4-year college versus a 2-year college (OR = 1.60, p = .06). The coach program is associated with better outcomes for students typically facing the most difficulties in the application process.

t tests comparing the coach coefficients between subgroups show significant differences in the coach association with less selective 4-year college enrollment (vs. 2-year) for Latino versus African American students and possibly for lower versus higher SES students (p = .06) but not for AP versus non-AP students (p = .46). This suggests that some ethnic and SES gaps in college enrollment may be reduced at coach schools.

On the other hand, we find that at a time when coaches focused on improving attendance at 4-year colleges, but not selective colleges,³ attending a coach school corresponds to lower chances of attending a more selective 4-year college (vs. less selective) for African Americans (OR = 0.69), non-AP students (OR = 0.55), and perhaps those at high college-planning high schools (OR = .74, p = .06). This finding deserves attention, if it has persisted, but it may have changed. A study released after our study period reported on "under-match," where some CPS students who would qualify for a more selective college do not attend one (Roderick et al., 2008). Since then, the district and the coach program have focused increased attention on improving attendance at more selective colleges.

Discussion

This research follows nearly all students in a large urban school district from senior year of high school through the fall after graduation. It provides a detailed picture of points of stratification in the high-school-to-college transition and how providing social resources may reduce barriers. The cross-sectional panel data set with measures before and after the onset of the coach program allows for a rigorous test of the relationship between the onset of the program and college actions and outcomes. Because coaches

		college vs. rolled	2	ege vs. not olled	Less selec college v	2		ss selective ollege
	0	R	(OR	01	2	0	R
	(SE)	<i>p</i> value	(SE)	p value	(SE)	p value	(SE)	p value
Aggregate	1.13 [†]	.06	1.08	.33	1.24*	.04	0.82	.14
	(.07)		(.09)		(.13)		(.11)	
Latino	1.17	.16	0.93	.58	1.86**	.00	1.64	.11
	(.13)		(.13)		(.37)		(.51)	
African American	1.12	.21	1.18	.15	1.08	.59	0.69*	.04
	(.10)		(.13)		(.15)		(.13)	
White	1.03	.90	1.07	.81	1.16	.69	0.64	.16
	(.23)		(.31)		(.43)		(.26)	
Lower SES	1.13	.20	0.96	.71	1.71***	.00	0.87	.53
	(.10)		(.11)		(.27)		(.20)	
Higher SES	1.13	.17	1.23 [†]	.08	0.97	.81	0.79	.17
	(.10)		(.15)		(.14)		(.14)	
Non-AP	1.16^{+}	.06	1.09	.35	1.35*	.02	0.55**	.01
	(.09)		(.10)		(.17)		(.13)	
AP	1.13	.36	1.03	.89	1.01	.97	1.11	.56
	(.15)		(.21)		(.21)		(.19)	
Low college-planning	1.11	.32	0.96	.75	1.56*	.01	1.16	.65
high school	(.11)		(.12)		(.27)		(.36)	
High college-planning	1.17^{\dagger}	.07	1.18	.13	1.14	.34	0.74^{+}	.06
high school	(.10)		(.13)		(.15)		(.12)	
Lower SES African	0.99	.97	0.90	.59	1.60 [†]	.06	0.51 [†]	.06
Americans	(.16)		(.17)		(.39)		(.18)	

 TABLE 5

 Odds Ratios for Coach Effect on Enrollment Outcomes by Subgroup

Note. Odds ratios come from fixed effects logistic regressions that control for race/ethnicity, gender, neighborhood social status and poverty, grade point average, number of advanced placement and vocational classes, participation in Upward Bound and district postsecondary programs, year fixed effects, and a high school trend in college enrollment. OR = odds ratio; SE = standard error; SES = socioeconomic status; AP = advanced placement.

[†]p < .10. *p < .05. **p < .01. ***p < .001.

were not randomly assigned to schools, however, the estimated odds ratios could be inflated, and these results must be interpreted with caution. Coach schools do not differ systematically from non-coach schools on many measured characteristics and trends prior to program onset, and the analysis has reduced potential selection bias through statistical adjustments. However, unmeasured dynamic differences between coach and non-coach schools could account for the findings. The findings do suggest, though, that this program, or similar ones, is worth further investigation with more rigorous evaluation methods.

The analysis finds two gaps in the enrollment process: Many students with general college

plans do not form specific plans, and specific plans are not sufficient for enrollment. These gaps are larger for Latino, non-AP, and lower SES students. This finding is important for school staff or researchers who sometimes mistakenly assume that specific stated plans at the end of senior year translate into actual college enrollment in the fall. Schools may have greater success at reducing the first gap since students are in school when they form specific plans. However, schools may also be able to take some measures during the school year to reduce the second gap (e.g., coaches help students complete actions or anticipate and plan for challenges likely to arise in the summer), or they may offer summer help to graduated seniors. These results

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indicate that one cannot assume that the college choice process is over when the school year ends. Students face serious challenges after schools close for the summer.

College actions appear to be an important mechanism for reducing gaps in the enrollment process. Many students who have general college plans do not take actions to make college happen. Although this does not preclude attending college, students who do not complete these actions risk missing key deadlines, have less access to school help, and may have fewer (and perhaps less desirable) college options. Students who complete key actions are more likely to form specific plans and to enroll in college, in less selective 4-year versus 2-year colleges, and in more versus less selective 4-year colleges.

Unlike the traditional counseling model, college coaches use innovative strategies to engage new groups of students in social interactions to improve college enrollment outcomes. Coaches' strategies may allow them to provide key social resources, including social support, detailed and ongoing help, and monitoring of key actions in the process (Stephan, forthcoming). Students at coach schools were significantly more likely to attend less selective 4-year colleges, which have much higher graduation rates than 2-year colleges,⁴ and they were more likely to enroll in college (borderline significant at p = .06). On the other hand, coaches are not associated with 2-year college enrollment (vs. no enrollment), which is not encouraged, or with more selective (vs. less selective) 4-year college enrollment (which was not a program emphasis during these years). Coaches appear to affect enrollment outcomes by increasing the number of students applying to three or more colleges and completing the FAFSA.

The most surprising results are for more disadvantaged students. In many programs, the rich get richer. Whereas coaches are charged with improving college enrollment outcomes for all types of students, coaches' emphasis on social resources may have particular benefit for students often underserved by traditional approaches, students with more difficulties in the application process, and students from schools with a low percentage of college planners (which may reflect a lack of college-going culture). Moreover, analyses suggest that coaches are associated with reduced gaps in less selective 4-year college enrollment between Latinos and African Americans and possibly between lower and higher SES students.

On the other hand, the reduced odds of attending more selective 4-year colleges for some groups of students (African Americans, non-AP students, and possibly students from high college-planning high schools) are a concern, if they have persisted, particularly since more selective colleges have higher graduation rates and earnings. We think that this finding results from the program's lack of emphasis on more selective colleges during the study period. If so, then it may have already changed because the program increasingly has focused on improving "college match" for higher achieving students in the past 2 years.⁵

More speculatively, these results may suggest lessons for guidance counselors. Although it is often assumed that high school counselors do college advising as a major part of their responsibilities, counselors are assigned a multitude of other duties that can include course scheduling, personal or crisis counseling, tasks related to testing, school discipline, and hall or lunchroom monitoring. Coaches, on the other hand, devoted full time to college counseling during the study period. In addition, as discussed in the introduction and in further detail in qualitative research (Naffziger, 2011; Stephan, forthcoming), coaches use innovative advising strategies that may enable them to reach new kinds of students and provide important social resources. None of these strategies requires complex skills, and counselors could do them. In other words, if counselors or other staff had the time and provided the kinds of procedures and affected the kinds of college actions seen in this program, they might have comparable benefits. Of course, this is only a conjecture, but it is noteworthy because so little thought is given to alternate approaches to counseling that might better help underserved groups.

The coach program also has potential drawbacks. First, it is reasonable to wonder whether a program that targets activities in senior year can be effective. College planning often begins by eighth grade (Hossler, Schmit, & Vesper, 1999), admission to selective colleges requires planning and successfully completing a sequence of courses, and admission to a highly selective college requires a sustained involvement in extracurricular activities. Middle-class parents may help with strategically planning their children's curricular or extracurricular choices over time (Lareau & Weininger, 2008). In contrast, although coaches aspired to serve students at all grade levels, most of their activities and efforts were aimed at seniors. Beginning the process in senior year is very late, but senior year is clearly pivotal: Many decisions and actions must be taken then. A program that begins earlier could potentially have additional benefits, but this article suggests that a senior year program can have benefits, and it may be one cost-effective approach to improving some enrollment outcomes.

Second, the coach program focuses on college enrollment and not on college completion. Completion rates are less than 60% overall and even lower for minority and low-SES students (National Center for Education Statistics, 2012). One may wonder whether the coach program improves enrollment but leaves students unprepared to succeed at college. Coaches are aware of low completion rates and may direct students to colleges in which they believe students will have the best chance of success (Naffziger, 2011). We do not have evidence, however, about the long-term program effects, and this is a potential limitation. At the same time, prior research shows that some students who qualify for selective colleges end up in community or unselective 4-year colleges because they do not know about college procedures, differences in institutional types, or how to pay for college (Bowen, Chingos, & McPherson, 2009; Roderick et al., 2008). The coach program aims to address these knowledge gaps.

Improving access to financial aid and academic preparation are important ways to improve the college enrollment outcomes of disadvantaged students, but policy should also consider other barriers. The enrollment process itself can reproduce social stratification. Whereas middle-class parents often supply the necessary knowledge, support, and monitoring for their children in the enrollment process, other children may falter on small details. Advising models that provide social resources in the application process, such as the college coach program, may potentially reduce social reproduction, helping disadvantaged students to make specific plans and take the requisite college actions to improve their educational attainment.

	Coach	n schools	Non-co	oach schools	Mean difference?
	М	SD	М	SD	<i>p</i> value
Average ACT composite	16.4	2.3	15.3	1.0	.17
% limited English proficient	6.7	7.7	5.0	6.5	.51
% Asian	3.6	5.8	2.0	4.7	.42
% African American	49.9	45.4	66.8	36.5	.27
% Latino	39.3	41.6	24.9	28.0	.30
% White	6.7	8.9	6.1	11.2	.20
Attendance rate	85.9	3.5	85.0	4.6	.49
1-year dropout rate	11.8	6.1	13.1	6.4	.53
Graduation rate	70.5	7.2	72.2	14.7	.58
% low income	80.5	18.0	87.9	8.9	.21
Total enrollment	1772	446	1254	654	.00

APPENDIX A

Comparison of Coach and Non-Coach Schools in 2004 (n = 58)

Note. p value refers to a *t* test for mean differences (does not assume equal variances).

APPENDIX B

Three Most Frequently Attended Colleges by College Selectivity (class of 2007)

Most Competitive University of Chicago Northwestern University New York University Highly Competitive University of Illinois at Urbana-Champaign Illinois Institute of Technology Miami University-Oxford Very Competitive DePaul University Loyola University Chicago Bradley University Competitive University of Illinois at Chicago Northern Illinois University Southern Illinois University-Carbondale Less Competitive DeVry University Columbia College Chicago East-West University Non-Competitive Northeastern Illinois University Mississippi Valley State University Grambling State University Special/Unrated Robert Morris College The Franciscan University School of the Art Institute of Chicago 2-Year City Colleges of Chicago-Wilbur Wright City Colleges of Chicago-Harold Washington City Colleges of Chicago-Kennedy-King

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Notes

1. Some previous research in this area refers specifically to college-related *social capital* (e.g., González et al., 2003; Simmons, 2011). Here, we have chosen to use a more generic term, *social resources*, because building a case that coaches' assistance constitutes social capital is outside the scope of this analysis.

2. We also estimated models using linear fixed effects regression with clustered standard errors with

and without propensity weighting. Results were similar for most outcomes and most subgroups. We present the fixed effects logistic regression because the dependent variables are binary and not continuous (see Allison, 2005; Melguizo, 2010).

3. Consortium researchers and district officials report that the district began focusing more attention on college selectivity after the release of a report in 2008 by the Consortium on Chicago School Research. Since that time, which occurred after the study period, the coach program has implemented changes to target students who qualify for more selective colleges.

4. We are not suggesting that 4-year colleges are the only or even the best option for all students, but shifting enrollments to 4-year colleges was a goal of the coach program.

5. Other possible explanations for this result are as follows: (a) Coaches may think that helping a small group of students apply to more selective colleges (with longer applications) would take time away from helping the majority of students. (b) Working in groups, coaches may focus on less selective colleges, which most students attend (just 7% attend more selective 4-year colleges), and may worry that discussing more selective college procedures could discourage or confuse students considering less selective ones. (c) Coaches may focus on student-college fit on dimensions other than selectivity. (d) Coaches may recommend less selective colleges, believing that they offer students more financial aid (Naffziger, 2011). Although the data do not allow investigation of these speculations, this negative finding raises important questions.

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Authors

JENNIFER L. STEPHAN (BA, Vassar College; PhD, Northwestern University) is a researcher at the American Institutes for Research. Her research focuses on college access and success, and more broadly, she is interested in how schools, programs, and policies reduce or reinforce social stratification. Her recent publications include *Stratification in College Entry and Completion* (Stephan, Rosenbaum, & Person, 2009) and *Beyond One-Size-Fits-All College Dreams: Alternative Pathways to Desirable Careers* (Rosenbaum, Stephan, & Rosenbaum, 2010).

JAMES E. ROSENBAUM (BA, Yale University; PhD, Harvard University) is a professor of sociology, education, and social policy at Northwestern University. His books include *Crossing the Class and Color Lines*, University of Chicago Press, 2000; *Beyond College for All*, Russell Sage Foundation, 2001 (awarded the Waller Prize in Sociology); and *After Admission*, 2006 (with Regina Deil-Amen and Ann Person). He is an advisor to the National Assessment of Career and Technical Education, Complete College America, and the New College at CUNY.

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