



Are Discussions about College between Parents and Their High School Children a College-Planning Activity? Making the Case and Testing the Predictors

Author(s): Scott M. Myers and Carrie B. Myers

Source: *American Journal of Education*, Vol. 118, No. 3 (May 2012), pp. 281-308

Published by: [University of Chicago Press](#)

Stable URL: <http://www.jstor.org/stable/10.1086/664737>

Accessed: 26-01-2016 13:54 UTC

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <http://www.jstor.org/page/info/about/policies/terms.jsp>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.



University of Chicago Press is collaborating with JSTOR to digitize, preserve and extend access to *American Journal of Education*.

<http://www.jstor.org>

Are Discussions about College between Parents and Their High School Children a College-Planning Activity? Making the Case and Testing the Predictors

SCOTT M. MYERS

Montana State University

CARRIE B. MYERS

Montana State University

Our research goals are to make the case that parent-student discussions about college planning should be seen as a distinct college-planning activity and to identify and test the relevant predictors of these discussions. Findings from over 4,000 parents and their high school children show that parent-student discussions are enhanced when both the parents and students engage individually in college preparation, have higher college aspirations, and are more involved in the school and community. These activities of parents and students interact significantly to further enhance intergenerational discussions. The findings can inform current models and approaches to college choice as well as policies and programs that strongly emphasize parental involvement.

Both academic preparation and college planning are required for US high school students to enroll in higher education (Perna 2007; Tierney et al. 2005). A rigorous and college-focused high school curriculum is essential (Perna 2005b); however, college planning may be just as essential. For high school students with similar achievement and aspiration levels, those who lack college planning are less likely to attend college (Somers et al. 2002; Tierney et al. 2005). Timing matters as well: families who engage in earlier and informed college planning have higher college aspirations and attendance, especially as many families rely on financial aid (Bergerson 2009; Cabrera et al. 2006; Goldrick-Rab et al. 2007).

College planning and enrollment are usually approached with models of

Electronically published February 28, 2012

American Journal of Education 118 (May 2012)

© 2012 by The University of Chicago. All rights reserved.

0195-6744/2012/11803-0001\$10.00

Parent-Student Discussions about College Planning

college choice, especially the three-stage model of Hossler and Gallagher (1987) that was later refined in subsequent works (Hossler et al. 1989, 1999). In this model, college choice consists of three stages in which families form college aspirations (predisposition stage), collect information about college attendance (search stage), and make decisions about and arrangements for college attendance (choice stage). Activities that comprise college planning are usually located in the search stage, although there is growing recognition that these stages blend into each other (Shaw et al. 2009; Smith and Fleming 2006). One activity that is important in all three stages is parental involvement, especially in the search stage. Hossler and Gallagher (1987) and others (Park 2008; Plank and Jordan 2001) posit that one specific form of parent involvement—parent-child communication—is particularly crucial to college preparation and enrollment. However, there are currently three gaps in the research: the search stage is the least studied, there is a lack of a theoretical and empirical focus specifically on parent-child communication, and no research to date has examined the predictors of parent-child communication about search-stage topics.

The goal of this research is to make the case that parent-child communication about college should be regarded as a key college-planning activity and important enough to be part of college choice models or discourse. Much of the college choice process involves parents and their children engaged in active and interactive behaviors. Given that our study examines a behavior that is both active and interactive, the results have the potential to inform models of college choice. We advance the research goal by first reviewing theory and research on college choice and parent-child communication. Next, we use interview data from 4,306 parent-student dyads in grades 9–12 from the 1999 wave of the National Household Education Survey (NHES:99; NCES 2000) to achieve an understanding of what variables may enhance parent-student communication.

Even though the NHES:99 contains older data, it is still an ideal study, because it was the last time that interviews were conducted with an intergenerational parent-child dyad and information was collected about college planning from both the student and parent. These data allow us to develop baseline estimates of three important activities underlying our study: (1) How common is parent-student communication about college planning? (2) How does this

SCOTT M. MYERS is an associate professor in the Department of Sociology and Anthropology. His research focuses on the intersection of family and education. CARRIE B. MYERS is an assistant professor in the Department of Education and is the current director of the Adult and Higher Education program. Her research focuses on K–20 issues as well as higher education faculty, structures, and policies.

communication vary across substantive topics? (3) Are there grade-specific trends? We then use these data to address our main research goal of uncovering the variables that may enhance parent-student communication. The main variables we examine are student and parent levels of college aspirations, college preparation, and involvement in school activities and in the community (for students only). We are interested in whether levels of parent-student communication are related to these variables individually and also to combinations of these variables. We measure parent-student communication across the following four substantive topics: academic requirements for college, financial aid for college, cost of college, and type of college to attend.

Background

We argue that parent-student communication about college planning merits more consideration in models of college choice. To this end, we introduce models of college choice and the importance of college planning, review existing studies on parent-student communication and college going, and situate parent-child communication within the search stage. We then use these same college choice models to elaborate a set of predictors of parent-student communication. We focus specifically on college planning, which is different than academic preparation. College planning incorporates many activities but generally refers to the gathering of information on and becoming aware of the financial costs of college, financial aid options, college types, and college admission requirements. Academic preparation, or “college readiness” (Corwin et al. 2005), refers to the quality and quantity of high school courses taken that would qualify a student for college admission and prepare him or her for college-level curricula. College planning and academic preparation are both part of the larger concept of college preparation (Cabrera et al. 2006; Corwin et al. 2005).

Models of College Choice and College Planning

Many excellent treatments of models of college choice exist in the literature (Bergerson 2009; Cabrera and La Nasa 2000; Kinzie et al. 2004). Thus, only a brief overview is presented. There exist several multistage models of college choice, such as the seven-stage model of Kotler and Fox (1985) and the five-stage model of Hanson and Litten (1982). Most research to date has relied on the three-stage model of Hossler and Gallagher (1987). The first stage includes developing a predisposition toward higher education and college aspirations, where aspirations reflect the behaviors and values of parents’ and

Parent-Student Discussions about College Planning

students' commitment to a college trajectory (Smith and Fleming 2006). The developmental length and timing of this predisposition vary across individuals and families but are generally set by the eighth or ninth grade. During this stage, students and parents are influenced by their own characteristics and statuses and also by peers, counselors, teachers, other parents, and school and community characteristics. The second stage includes searching for relevant information that will help families make decisions about the college choice application and enrollment processes. During this stage, students and parents create a "choice set" of higher education institutions, which are those where applications and entrance examinations are sent. The final stage is one of choice and involves college admission, enrollment, and actual attendance. During this stage, institutions to which the students applied determine admission, and families must then decide to accept any offers. Families also decide whether to apply for financial aid and, ultimately, weigh the alternatives and the choice whether to enroll.

This is a description of the standard college choice model, which is often criticized for being overly generic and less sensitive to the issues faced by nontraditional groups. For example, Smith and Fleming (2006) argue that the search stage is much longer for black students and families, often stretching into the twelfth grade. Perna and Titus (2005) argue that the effect of parental involvement on college enrollment varies across racial and ethnic groups, as white parents place a greater premium on college enrollment. In extending this work, Perna (2006) draws on the concept of "habitus" to argue that the relationship among college aspirations, plans, and enrollment is more complex than those in the traditional college choice models and varies by race, ethnicity, and social class. Others argue that elements of the traditional college choice model may be less characteristic of first-generation college students, returning and adult students, and those involved in college intervention programs at high schools (Cho et al. 2008; MacAllum et al. 2007; Shaw et al. 2009).

Most research using the three-stage model approaches college choice from the perspective of parents and students. However, an important part of the model that is often overlooked is the role of individual colleges and the institution of higher education. It is clear that all three stages are influenced by the actions of colleges, such as recruitment practices, marketing campaigns, admission requirements, and financial aid resources. The role of these actions may be especially influential for the college-going plans and behaviors of lower-income, minority, and first-generation college students who often have incomplete information (Perna 2005a). Unfortunately, the NHES:99 data do not contain measures about their college activities.

Still, most authors agree that the three-stage model is a good organizing framework and that college planning is necessary for college attendance (Bergerson 2009; Kinzie et al. 2004; Perna 2006; Smith and Fleming 2006). Kao

and Tienda (1998) argue that a lack of information about college and financial aid creates formidable roadblocks and goes far in explaining why students with high college aspirations often do not attend college. This information needs to come early and often, as early awareness and knowledge are pivotal factors in developing strategies for postsecondary education (Cabrera and La Nasa 2000). Comprehensive college planning is important, given that many families face potential financial constraints that could be overcome if they have knowledge of and plans for financial aid (College Board 2009). Carneiro and Heckman (2002) analyze data from the National Longitudinal Survey and find that for nearly all American families (92 percent) the availability of financial aid and fiscal benefits make college enrollment possible across all income levels.

For actual college enrollment, rates are higher among families who early on begin the process of gathering information on college requirements and the availability of financial aid, net of aptitude differences. Data from the National Educational Longitudinal Studies (NELS) find that high school students are more likely to attend college when they have earlier contact with counselors about college plans and place more value on the role of financial aid (Somers et al. 2002). Plank and Jordan (2001) also find that college planning significantly increases the odds of attending a four-year institution. The students most likely to enroll are those who plan for standardized testing, seek college guidance information, and seek financial aid options and literature. In a review of the literature, Goldrick-Rab et al. (2007) find conclusively that college enrollment is linked directly to levels of college planning. The gathering of early and greater amounts of information not only prepares families to make better decisions about college options and requirements but also increases aspirations and decreases discouragement due to incorrect cost estimates and the misalignment of ambitions.

Parent-Student Communication and College Going

We argue that parent-student communication is a distinct college-planning activity, and the review above suggests that this communication influences college-going outcomes. The few existing studies support this assumption and provide the empirical “so what?” aspect of our research. Using data from the NELS, Perna and Titus (2005), Plank and Jordan (2001), and Sandefur et al. (2006) all find positive effects of parent-student communication on college going. Plank and Jordan (2001) analyze the NELS:88 and find that higher levels of parent-student discussions about school-related topics increase the odds of students attending a four-year college versus a two-year college or no college enrollment at all. Perna and Titus (2005) focus on the second and

Parent-Student Discussions about College Planning

third waves of the NELS and find that higher levels of parent-child discussions increase the odds of students attending a four-year college or a two-year college versus no college enrollment at all. Sandefur et al. (2006) use four waves of the NELS and also find that parents and children who have high levels of school-related discussions are much more likely to enroll students in a four-year institution, and students are less likely to attend a vocational or two-year institution or not to attend at all.

In conceptualizing the positive role of parent-child discussions in college enrollment, all three studies rely on the work of Coleman (1988), who argues that parent-child contact (i.e., discussions) is one of the main markers of within-family social capital. Meanings of the term “social capital” vary but generally refer to social relations that have the potential to provide valuable resources and information (Lin 2001). Within-family social capital, therefore, means family-based relations that provide parents with resources and information to purposively guide and monitor their children’s development.

Following this line of thinking, these three studies generalize that greater levels of communication allow parents to better guide their child’s educational life, provide education-related resources, and overcome structural constraints and the lack of other resources. Parents and students must engage in discussions that share information and infuse adult influences and guidance into the college choice process to make individual information on college preparation work efficiently (Plank and Jordan 2001). These discussions may offset incomplete or inaccurate college information that often characterizes low socio-economic-status families and makes college seem out of reach. For Perna and Titus (2005, 487), parent-child discussions about education-related issues are a form of parental involvement and a form of “social capital that provides individuals with access to resources that may facilitate college enrollment.” The approach by Sandefur et al. (2006) is a mix of these two: parent-child discussions are family-related resources (i.e., social capital) that have independent effects on college outcomes and may offset financial resource differentials that influence educational outcomes.

Parent-Student Communication and College Choice Models

To address the theoretical relevance of our research, we assert that parent-student communication about college planning be afforded a greater and distinct role in models of and research on college choice. As shown above, this argument does receive empirical support, albeit limited by the small number of studies. Yet, even among these studies, only Plank and Jordan (2001) situate the research within a college choice framework. So to build on this single study and move our own research forward theoretically, we introduce

four propositions to frame our approach, organized from broad to narrow in scope.

First, the role of parent-child discussions in college-related outcomes is best situated within models of college choice rather than within a more general social capital framework. Each stage in models of college choice contains distinct activities and requirements that are necessary to progress from one stage to the next, as well as to transition successfully to higher education (Bergerson 2009). According to Hossler et al. (1999), this stage approach explicitly frames college choice as a set of information-decision activities, such that the information and decision outputs of one stage become the inputs for the next stage, and the uncertainty at each stage is reduced (see Stinchcombe 1990). Much of this information is culled from interactions, relationships, and networks that are considered social capital; so, using a college choice model that contains forms of social capital is inclusive and more dynamic than using the concept of social capital alone.

Social capital is often an ambiguous term (Lin 2001). Our use of the term is best viewed as a social network approach and similar to that of Farmer-Hinton (2008), Hossler et al. (1999), Perna and Titus (2005), Plank and Jordan (2001), and Sandefur et al. (2006). Stanton-Salazar (1997) views social capital through a network-analytic approach, in which social capital represents relationships with institutional agents who have the capacity to transmit institutional resources, information, support, and opportunities. These agents can range from teachers to community leaders to peers. Perna and Titus (2005) view social capital as resources that are embedded in social networks and relationships, which can be mobilized when a specific action or outcome is desired.

Second, parent-child communication is a distinct information-decision activity because “parental involvement” is such a dominant feature in models of college choice; parent-child communication is one form of this parental involvement; parent-child communication is an original measure of within-family capital (Cabrera and La Nasa 2000; Coleman 1988; Hossler et al. 1999). In support, Jeynes (2010) finds through meta-analytic research that most of the potent aspects of parental involvement are actually quite subtle activities, such as parent-child communication.

Indeed, parents engage in three broad activities across the college choice stages: setting aspirations, providing encouragement, and active support (Smith 2008; Smith and Fleming 2006). Parent-child communication plays a large role in all three of these activities, such as direct conversations about the cost of college, verbal reinforcement of aspirations, and substantial home counseling activities.

Third, for predictive ability, measures of parent-child discussions need to be more college-specific than those used in prior studies. As they rely on the NELS data, the measure of parent-child discussions used by Plank and Jordan

Parent-Student Discussions about College Planning

(2001), Perna and Titus (2005), and Sandefur et al. (2006) is necessarily more generalized and not focused specifically on college preparation, broadly defined. Each study creates an index from the discussions between children and parents about course selection, school activities, in-class studies, student grades, plans for standardized tests, and college applications. Of these six, only the last two would be considered college-planning activities.

For this reason, our fourth proposition is that parent-child communication must be stage specific. Our study focuses on communication about college planning, which fits squarely in the search stage (stage 2). But other measures of parent-child communication should be geared toward the activities that best define each stage. For example, stage 1 would include parent-child discussions about the development of college aspirations, and stage 3 would include parent-child discussions about college attendance decisions and financial arrangements.

These propositions are not entirely original, yet, this is the first time to our knowledge that they are presented in the current approach and as a single package. Separately, similar themes exist elsewhere. Smith (2008) makes a distinction between different contexts of parental involvement and argues that it is important to distinguish general parental involvement in education from its counterpart in the college choice process, where involvement is specific to college preparation and enrollment (propositions 1 and 3). Tierney et al. (2005) argue that parental involvement is critical to college planning and access. Part of this engagement is involvement in the child's school, but the other part is what takes place in the home, like the strategy of parent-child communication. This communication must include college-planning issues (propositions 2, 3, and 4). Pong et al. (2005) argue that parent-child communication by itself is not enough. Effective parent-child communication depends on the topics of discussion, and education-related outcomes must include "school talk" (propositions 2 and 3).

The Predictors of Parent-Student Communication about College Planning

We stay within the three-stage model of college choice to elaborate four sets of variables that we expect to predict levels of parent-student communication about college planning. The first set of variables includes those in the predisposition stage, which precedes the search stage. Here we use separate measures of college aspirations from the child and parent. We expect that parents and students with greater college aspirations would engage in behaviors to realize those goals, such as greater communication about college planning during the next stage of search.

The second and third sets include variables that may influence the topics,

depth, and information-decision activities of parent-child discussions. Specifically, the second set of variables includes the separate college preparation activities of parents and students. This set is intended to mimic the important aspects of parental communication according to Smith and Fleming (2006) and Smith (2008). These aspects include discussions about college costs, proximity, in-state and out-of-state options, and prestige as well as the consistency and congruency of such topics. We assume that parents and students who engage in their own college preparation activities will be more likely to also engage in parent-student discussions, given that they have more information to discuss in the first place. This assumption is consistent with the three steps of information gathering and processing during the search stage: attentive, active, and interactive (Hossler et al. 1999).

The third set of variables reflects the use of social capital in college choice models. We include variables that represent the social involvements, interactions, and networks of students and parents that have the potential to provide resources and information on college-related topics (Bergerson 2009; Cabrera and La Nasa 2000; Farmer-Hinton 2008; Holland 2010; Hossler et al. 1999; Perez 2010). For parents, the NHES:99 data limit us to include only school-based interactions. For students, we include school-based activities but also extracurricular and community activities. This approach remains consistent with the definition of social capital provided earlier, in which social capital is viewed through an overly socialized, network-analytic framework. As with the logic attached to the second set of variables, parents and students who engage in more social interactions will be more likely to also engage in parent-student discussions, given that they have more (potential) information to discuss in the first place.

These types of social interactions may serve another important purpose. According to Guilamo-Ramos et al. (2006), effective parent-child communication hinges on a number of variables, but two are critical: perceived expertise and trustworthiness. These tap into the notion that parents (and children) give good advice, are credible sources of information, and are looking out for the best interests of each party. As parents and students interact more with resourceful institutional agents and institutional agents of change (Farmer-Hinton 2008; Stanton-Salazar 1997), each side may perceive the other as an expert and trusted source of college information and be more likely to initiate intergenerational communication.

The final set of predictor variables does not present any new measures. For these we construct a series of interaction terms to create intragenerational and intergenerational measures. The individual behaviors and activities of students and parents may interact within and between generations to better predict parent-student communication and capture the dyadic form of our dependent variable. These interaction variables are consistent with the thought that the

Parent-Student Discussions about College Planning

college choice progression is a set of individual and interactive processes undertaken by students and parents. They recognize that the outputs and inputs within and between college choice stages come together and influence each other (Hossler et al. 1999), a lack of parent-student congruency in college plans is counterproductive (Smith and Fleming 2006), and face-to-face interactions have the potential to diminish or to escalate the value and processing of separate forms of information (Hossler et al. 1999).

Much like the traditional college choice approach, our main predictors of parent-student communication about college planning are overly generalized. Therefore, we include numerous demographic and stratification control variables that are associated with the independent and dependent variables. These variables are drawn from research that shows that resources, statuses, and structures may influence the predictors and the predictors' relationships with parent-student communication (Holland 2010; McCarron and Inkelas 2006; Perez 2010; Rowan-Kenyon et al. 2008).

Based on our assumptions and predictors, we examine five research questions: (1) How are college aspirations and preparation related to parent-student communication about college? (2) How is parent and student involvement in schools and the community related to parent-student communication about college? (3) How do the college aspirations and preparation of students work together as they relate to parent-student communication about college? (4) How do the college aspirations and preparation of parents work together as they relate to parent-student communication about college? (5) How do the college aspirations and preparation of parents and students work together as they relate to parent-student communication about college? The last three questions test interaction relationships, where the influence of one variable (e.g., aspirations) may vary across different levels of another variable (e.g., preparation).

Method

Data and Sample

The data to address these questions come from the 1999 Wave of the National Household Education Survey, which is a random-digit-dialing telephone survey covering the 50 states and the District of Columbia. Unlike other educational surveys, the design of the NHES:99 does not include any sampling at the school level, so clustering of students within schools is not an issue for the NHES:99 or any regression-based analyses.

The NHES:99 is the only wave to contain an intergenerational parent-child dyad. The parent survey includes completed interviews with the parents or

guardians of 24,600 children from birth to age 20. Nearly all of the adults are parents (95 percent). The youth survey consists of 7,913 children in grades 6–12 for whom parental consent to interview was given. Three children were omitted, as their grade level could not be determined. Of the 7,910 students and parents, only 625 (7.9 percent) of families have a student or parent who reports no college expectations, and these observations are deleted.

The current study examines a subsample of the remaining 7,285 parent-student pairs who have college expectations. Specifically, we examine only those students in grades 9–12, as this was the subgroup of students asked the college preparation questions in the original NHES:99 interviews. This subsample is composed of 4,306 parent-student pairs and does not differ from the full sample in any meaningful ways (e.g., race, nonresponse) except grade level. As the dependent variable depends on grade level, this variable is used as a control throughout the analyses.

Analysis of nonresponse bias among numerous parent and student variables (e.g., race, income) shows no evidence of bias in estimates from the NHES:99, and statistical adjustments by weighting may correct at least partially for biases that might exist due to differential nonresponse (NCES 2000). In the NHES:99, the largest component of nonresponse is nonresponse to the screener. The NHES:99 data files use an analysis to create the nonresponse adjustment cells that are then used to adjust for screener nonresponse, even though the NCES (2000) finds no evidence to suggest that there was nonresponse bias attributable to screener nonresponse. Overall, the NHES:99 should be seen as a nationally representative sample that is generalizable to the entire civilian, noninstitutionalized population of children from birth through grade 12 (parent interview) and students in grades 6–12 (youth interview). Nonetheless, we use the weighting strategy recommended by NCES (2000) to account for differential probabilities of selection and to reduce potential bias due to nonresponse and differential coverage of subpopulations. Therefore, our subsample of 4,306 students in grades 9–12 is nationally representative of all civilian, noninstitutionalized students in those grades in the 50 states and the District of Columbia for the school year in which the data were collected.

Variables

Table 1 shows the coding and descriptive statistics for all variables. The dependent variable measures the extent to which the student talks to his or her parents about (1) academic requirements for college, (2) financial aid for college, (3) cost of college, and (4) type of college to attend (1 = yes; 0 = no). Confirmatory factor analysis finds that the four variables demonstrate a simple structure and exceed the eigenvalue-one criterion. A parent-student com-

TABLE 1

*Unweighted Sample Characteristics of the "NHES: 1999 Methodology Report":
Students and Parents*

Variable	Range/Coding	Mean	SD
Parent-student communication	0-4	2.40	1.41
Student preparation index	0-5	2.09	1.67
Parent preparation index	0-6	2.33	1.55
Parent's college aspirations	1-3	2.57	.59
Student's college aspirations	1-3	2.67	.68
Student involvement:			
Number of service activities	0-3	.40	.66
Hours per week in service	0-14.5	.58	1.31
School government	0 = no, 1 = yes	.17	...
School activities	0 = no, 1 = yes	.71	...
Extracurricular	0 = no, 1 = yes	.65	...
Hours per week in paid labor	0-45	8.40	10.13
Parental involvement:			
General school meetings	0-2	.97	.77
Scheduled parent-teacher meetings	0-2	.66	.73
Attend school or class event	0-2	.92	.87
School volunteer	0-2	.36	.64
Status and stratification controls:			
College-educated parents	0-2	.50	.73
Parental income	1-11	7.96	2.92
White, non-Hispanic	0 = no, 1 = yes	.71	...
Black, non-Hispanic	0 = no, 1 = yes	.16	...
Hispanic	0 = no, 1 = yes	.10	...
Other	0 = no, 1 = yes	.03	...
Sex	0 = male, 1 = female	.49	...
Grade level	1-4	2.44	1.12
Academic performance	1-5	3.98	.91
Biological family	0 = no, 1 = yes	.52	...
Single family	4,306	.29	...
Stepfamily	0 = no, 1 = yes	.14	...
Other family	0 = no, 1 = yes	.05	...
Working mother	0 = no, 1 = yes	.75	...
Working father	0 = no, 1 = yes	.81	...
English at home	0 = no, 1 = yes	.92	...
Homeowner	0 = no, 1 = yes	.74	...
<i>N</i>	4,306		

munication index is created by summing the variables ($\alpha = .74$; eigenvalue = 2.89) and ranges (0–4), with higher values indicating more topics discussed.

We use two measures of college aspirations. A parallel set of questions on the parent and student surveys asks about postsecondary plans and the type of college in which the child will start. The possible survey responses are: 1 = uncertain starting point, 2 = start at a two-year school, and 3 = start at a four-year school. College preparation is measured by two indices measuring the extent to which students and parents have begun gathering information on college. College preparation by students measures whether the student has talked to a teacher or counselor about (1) academic requirements for college, (2) financial aid for college, (3) cost of college, (4) type of college to attend, and (5) whether the student had acquired information about the cost of college tuition and mandatory fees (1 = yes; 0 = no). Using similar factor analysis and criteria, all five variables are summed to create the student preparation index ($\alpha = .83$; eigenvalue = 3.93) with a range (0–5) with higher values indicating greater preparation. College preparation by parents measures whether parents have (1) started saving money, (2) started making financial plans, (3) talked to someone or read materials on financial aid, (4) talked to someone or read materials on the academic requirements for college, (5) heard of the Lifetime Learning tax credit, and (6) heard of the HOPE Scholarship tax credits (1 = yes; 0 = no). Using similar factor analysis and criteria, all six variables are summed to create the parent preparation index ($\alpha = .72$; eigenvalue = 2.06) with a range (0–6) with higher values indicating greater preparation.

The last set of independent variables measures the social and network activities of students and parents. Student involvement is measured by two variables: (1) number of involvements in community service and volunteer activities and (2) average weekly hours spent in these activities. Additional variables measure involvement in (1) school government, (2) nongovernment school activities, and (3) nonschool extracurricular activities (1 = yes; 0 = no). We also measure how many hours a week the student generally spends in paid labor, as this is important to academic success (Mortimer 2005). Parental involvement measures four types of involvement in the child's school and assesses whether one (= 1), both (= 2), or none (= 0) of the parents attend: general meetings, scheduled meetings, class events, and committees.

The models include controls for status and stratification variables that influence the independent and dependent variables. The first set includes variables that typically measure at-risk status: (a) parents' educational level uses an NHES-created variable to code (0 = neither with college degree, 1 = one parent with college degree, and 2 = both parents with college degree), (b) household income is an NHES-created variable (range from 1 = \$5,000 or less to 11 = over \$75,000), and (c) race is measured by four dummy

Parent-Student Discussions about College Planning

variables: white (reference), black, Hispanic, and other. The original survey combines Asian and Pacific Islander into one response category, which we further include in the “other” category. The second set includes general control variables of language spoken at home, student’s grade level, student’s academic performance, family structure, employment, and housing tenure.

Analytic Strategy

The dependent variable is an ordinal count measure, which is usually analyzed by a Poisson or negative binomial regression approach. With count measures, the typical pattern is that most of the sample has values of zero or one, and the choice of an approach depends on whether there is an excess of zero values and the extent to which the data are overdispersed. However, the distribution of our measure of parent-student communication satisfies none of these conditions. Indeed, our dependent variable has fewer zero values than all of the other possible values. The following is the percentage distribution of number of college-planning topics discussed between parents and students (0 = 12 percent, 1 = 15 percent, 2 = 20 percent, 3 = 24 percent, and 4 = 29 percent). This distribution clearly eliminates a Poisson or binomial approach to modeling (and OLS regression). Further, as shown in table 1, our variance (1.98) is less than our mean (2.41), which indicates no overdispersion.

Given these distribution properties, we chose to use a sequential discrete choice model that recognizes the ordering of the data. Specifically, an ordered logistic regression approach treats the count outcomes as sequential, and ordered outcomes is an approach suggested by Cameron and Trivedi (2003). Ordered logistic regression is appropriate especially when all possible values are also observed in the sample. The ordered approach conceptualizes the variable Parent-Student Communication as a set of sequential stages, such that each subsequent outcome builds on the prior one. This assumption generally receives support in theories and studies of college choice that find families progress through stage-specific attitudes and activities (Bergerson 2009; Kinzie et al. 2004). The percentage distribution of the number of topics discussed supports this assumption, as it appears that parents and students move in an orderly fashion of zero to four topics. This progression is also supported by figure 1. Finally, in order to control for the complex sample design of the NHES:99, we estimate all standard errors using a Taylor series expansion method (NCES 2000).

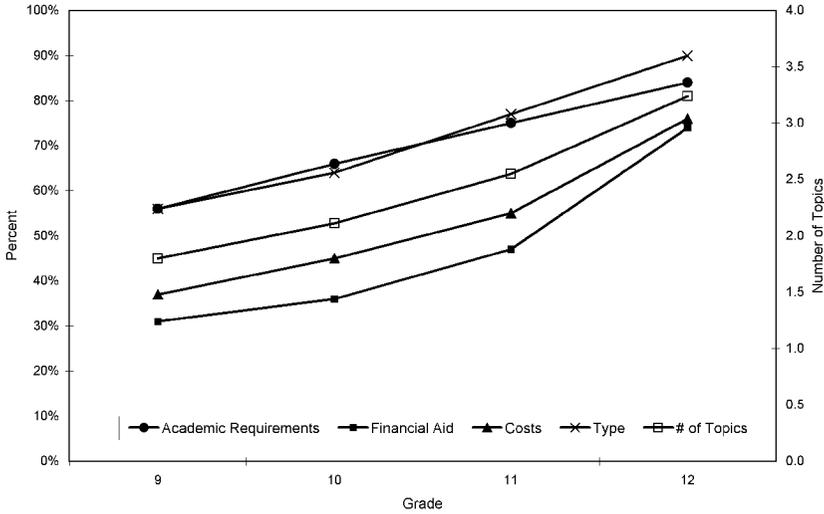


FIG. 1.—Parent-student discussion about college planning by grade (NCES 2000)

Results

Patterns in College Planning

Figure 1 shows two patterns by grade level: (1) the left axis and four black lines with solid markers represent the percentage of parent-student pairs that have discussed specific college-planning issues, and (2) the right axis and single line with an unfilled marker represent the average number of college-planning topics discussed by parents and students. Both patterns generally support the models about college choice regarding the topics of conversation and the assumption that parent-student discussions, in turn, proceed in a sequential manner. By the ninth grade, a majority of parents and students discuss issues related to college type and the academic requirements of attending college. Far fewer discuss the costs of college (37 percent) and financial aid opportunities and options (31 percent). The increase in the percentage of families who discuss college type and academic requirements is fairly linear between ninth and twelfth grades, to the point where 84 percent address issues about academic requirements and 90 percent address college type options. The path for the other two issues—financial aid and costs—is fairly linear between ninth and eleventh grades but then increases somewhat between the eleventh and

Parent-Student Discussions about College Planning

twelfth grades. By the twelfth grade, about 70 percent of families discuss issues pertaining to financial aid and the costs of college. The other interesting pattern is that the gap between the most and least discussed topics is 25 percentage points in ninth grade, which then narrows to 16 percentage points by twelfth grade.

These patterns are consistent with the three-stage model of college choice. The pattern for the discussion of financial issues shows that most families do not engage in these topics until the choice stage, which generally occurs in earnest during the twelfth grade. The patterns for college type and academic requirements show that most families discuss these topics by the choice stage in twelfth grade, suggesting that they are mostly discussed during prior stages. The grade-specific pattern for number of topics follows this sequenced pattern for the individual college-planning issues. In ninth grade, students and parents discuss an average of 1.8 topics, which represents less than half of the topics. By twelfth grade, students and parents discuss an average of 3.2 topics, which represents an acceleration in college planning between the eleventh and twelfth grades.

Predictors of Parent-Student Communication

For the ordered logistics results, we present the odds ratios, as they are substantively more interpretable than logit coefficients. The dependent variable ranges from zero (no topic discussed with parents) to four (all topics discussed with parents). For ordered logistic regression, each odds ratio is calculated by a series of equations that estimate the cumulative likelihood of being in pooled higher categories compared to being in pooled lower categories.

The models are shown in table 2. The first three models test the research questions individually. Model 1 finds that parents and students are significantly likely to discuss more topics about college preparation when they are both more prepared and informed. The odds ratio for student preparation is 2.05; this suggests that each one-unit increase in student preparation increases the odds of moving to the next-higher category of parent-student communication by a factor of 2.0, or 105 percent ($[2.05 - 1.00] \times 100$). Similarly, each one-unit increase in parent preparation increases the odds of moving to the next-higher category of parent-student communication by 33 percent. Model 2 finds strong statistical support for our research questions. Parents and students who have greater college aspirations are significantly more likely to engage in discussions about more college-planning topics. For students, each unit increase in their higher education aspirations is associated with a 213 percent increase in the odds of engaging in more discussions with their parents. Likewise, each unit increase in parental aspirations is associated with a 59 percent

TABLE 2

Ordered Logistic Results for Parent-Student Communication Regressed on College Preparation, Involvement, At-Risk Status, and Selection Variables

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Student preparation index	2.05***	1.94***	1.75***
Parent preparation index	1.33***	1.25***	1.17***
Student's college aspirations	...	3.13***	...	2.07***	2.09***
Parent's college aspirations	...	1.59***	...	1.07***	1.03***
Student involvement:					
Number of service activities	1.75***	1.46***	1.35***
Hours per week in service activities99	.95	.94
School government	1.50***	1.15***	1.17***
School activities	2.01***	1.48***	1.44***
Extracurricular	1.69***	1.41***	1.50***
Hours per week in paid labor	1.03*	1.01	.99
Parental involvement:					
General school meetings	1.05**	.95	1.00
Scheduled parent-teacher meetings	1.18***	1.17***	1.19***
Attend school or class event93***	.97***	1.03**
School volunteer	1.20**	1.08**	1.03
Status and stratification controls:					
Grade level	1.41***	2.21***	2.18***	1.59***	1.60***
College-educated parents98
Parental income	1.05***
Black, non-Hispanic96**
Hispanic	1.35***
Other86***
Sex	1.30***
Academic performance	1.22*
Single family	1.63**
Stepfamily99
Other family	1.15
Working father	1.22**
Working mother	1.78***
English at home94**
Homeowner99
AIC (smaller is better)	42,411,380	42,728,322	42,517,379	35,986,285	35,747,615
χ^2 LR (larger is better)	5,346,002	5,127,490	5,305,266	7,891,823	8,130,521

SOURCE.—NCES 2000.

NOTE.— $N = 4,306$; AIC = Akaike information criterion; LR = likelihood ratio.* $p < .05$.** $p < .01$.*** $p < .001$ (two-tailed).

Parent-Student Discussions about College Planning

increase in the odds of discussing additional preparation topics with their child.

Model 3 tests whether greater student and parental involvement is associated with greater levels of parent-student discussions about college planning. The results largely support this question. For student involvement, five of the six variables are statistically significant and positive. The effect sizes range from 3 percent for hours per week in paid labor to 101 percent for involvement in paid activities. Increases in these five activities are each associated with greater levels of intergenerational discussions about college preparation topics. For parents, all four variables tapping their involvement in school are statistically associated with parent-student communication, although the effect of one activity is in the opposite direction as that hypothesized. The cumulative odds of parents and students discussing more college preparation topics are higher by 5 percent, 18 percent, and 20 percent for each one-unit increase in parents attending general school meetings, scheduled parent-teacher meetings, and being a school volunteer, respectively. However, parental attendance at a school or class event statistically lowers the odds of parent-student communication.

The strength of these findings is tested with two additional models. Model 4 combines all of the focal variables involved in the first three models to estimate the competing or net associations. The overall general patterns seen in models 1–3 remain in model 4, but a few significant changes do emerge: (1) the sizes of odds ratios for student's and parent's college aspirations both decrease significantly but remain statistically significant; (2) the odds ratios for student involvement also decrease across the board, and the association of hours in paid labor becomes statistically nonsignificant; and (3) for parental involvement, their attendance at general school meetings is no longer a significant predictor.

The final and full model is estimated by a regression equation that includes controls for stratification and status variables known to influence college preparation and parent-child relationships (model 5). By tracking the odds ratios from model 4 to model 5, one can see how robust the associations are in model 4. Only two changes occur among the focal independent variables after controlling for a wide range of variables: (1) the prior significant coefficient for parental involvement as a school volunteer becomes nonsignificant, and (2) the odds ratio for parents' attending school or class events reverses signs and is statistically significant. In this full model, each unit change in parental attendance is associated with a 3 percent increase in the odds of discussing an additional preparation topic with their child.

The additional research questions are addressed with a series of interaction terms that test whether the focal independent variables have reinforcing influences on each other in the way they are associated with parent-student

TABLE 3

Ordered Logistic Results for Parent-Student Communication Regressed on Interaction between Preparation and Aspirations

Variable	Odds Ratio
Student preparation index	.98**
Parent preparation index	.31***
Student's college aspirations	.24**
Parent's college aspirations	.19*
Intergenerational and intra-issue interactions:	
Student preparation index \times parent preparation index	1.03***
Student's college aspirations \times parent's college aspirations	2.58***
Intragenerational and inter-issue interactions:	
Student preparation index \times student's college aspirations	.73
Parent preparation index \times parent's college aspirations	1.05**
AIC (smaller is better)	35,440,183
χ^2 LR (larger is better)	8,437,967

SOURCE.—NCES 2000.

NOTE.—This interaction model contains all of the lower-order terms and involvement and control variables shown in model 5, table 2. $N = 4,306$; AIC = Akaike information criterion; LR = likelihood ratio.* $p < .05$.** $p < .01$.*** $p < .001$ (two-tailed).

communication about college planning. To test these reinforcing influences, we create two sets of interaction terms and enter them into a reestimated model 5 from table 2. Our sets are (1) intergenerational and intra-issue and (2) intragenerational and inter-issue. The results are shown in table 3.

Of the four interaction terms, three reach statistical significance and reveal an interactive and reinforcing trend. For reinforcement across the generations and within issues, we see an interactive influence between a student's college preparation levels with that of his or her parents. The significant odds ratio of 1.03 suggests that the positive association of student preparation index on parent-student communication is statistically greater when parents have greater levels of their own college preparation efforts. The second interaction term crosses the two generational measures of college aspirations. The significant odds ratio of 2.58 again reveals the same pattern: the positive association of student aspirations on parent-student communication is statistically greater when parents have greater college aspirations for their children. For reinforcement within a generation and across the issues, one of the two in-

Parent-Student Discussions about College Planning

teraction terms is statistically significant. The term crossing parents' college preparation with their college aspirations is significant. An odds ratio of 1.05 reveals that parents' preparation and aspirations positively reinforce each other in their associations with parent-student communication about college planning.

We also conduct a number of ancillary analyses to break out the parent-student communication index into its component parts: the extent to which the student talks to his or her parents about (1) academic requirements for college, (2) financial aid for college, (3) cost of college, and (4) type of college to attend (1 = yes; 0 = no). We then reestimate a model 5 from table 2 for each of these measures individually using regular logistic regression techniques. The goal is to determine if the focal independent variables are selectively associated with the four single measures of parent-student communication. The results are nearly identical to those in table 2. It does not appear that student and parent preparation, aspirations, and involvement differentially benefit one topic of parent-student communication over another.

Discussion

Summary

We have two goals for this research: (1) delineate and support why and how parent-student discussions about college planning is a distinct college-planning activity that needs to be incorporated into models of college choice and (2) delineate and test variables that best predict this parent-student communication. The first research goal is addressed by presenting research and theory on the importance of parent-child communication for college going and how parent-child communication is a distinct form of parental involvement. We also demonstrate that parent-child communication is a concept that fits theoretically, substantively, and empirically into the three-stage model of college choice (Hossler and Gallagher 1987). We find support for our theoretical approach. The descriptive results (fig. 1) for the grade-specific topics and patterns of these discussions generally show that parent-student communication mirrors other activities, sequences, and topics in the three stages of a college choice model.

The second research goal is achieved by examining statistically whether parent-child communication is a function of various predictor variables that are derived from the college choice model and are typical variables used in research on college preparation and enrollment. The findings show that this set of variables is associated significantly with parent-child communication. Parent-child communication about college planning is enhanced when parents

and students have greater college aspirations, make extensive college preparation efforts, and are involved in school and community activities. We also find that combinations of these activities within and between students and parents further enhance parent-child communication. Overall, the pattern of results goes far in supporting our basic tenet that parent-child discussions occupy a distinct role in models of college choice.

Implications

The findings from the direct and interaction models inform a wide range of approaches to college preparation, choice, and enrollment. For the three-stage model that frames our research, the results inform thinking and research in two ways. First, findings from the direct models buttress arguments that view college choice as a set of information-decision activities, such that the information and decision outputs of one stage become the inputs for the next stage and in which uncertainty at each stage is reduced (Hossler et al. 1999). The variables in our models provide a glimpse of what this process may look like, where (1) the reduction of uncertainty could possibly occur in the search stage in the form of greater discussions about college planning between parents and their children (outcome variable), (2) the decision outputs would occur in the predisposition stage in the form of student and parent college aspirations (predictor variables), and (3) the information inputs would occur in the form of student and parent college preparation and involvement in the school and community (predictor variables).

Second, our interaction results support a growing recognition that the three stages blend into each other and that families go back-and-forth between stages based on information gathered in the current stage (Kinzie et al 2004; Shaw et al. 2009; Smith and Fleming 2006). In our model, the interaction between college aspirations and college preparation could signal that the predisposition and search stages are more iterative and recursive than previously theorized and researched. These interaction results also support the view above that college choice is a set of information-decision activities.

For a social capital approach, our study suggests that parent-child communication could be part of this approach if such communication enhances accurate information and rational decision making, especially in light of the empirical importance of parent-child communication for educational outcomes (Jeynes 2010). These contributions to the social capital approach may be particularly relevant for studies that focus exclusively on differential access to information and how families react differently to the same type of information (Avery and Hoxby 2004). That is, as our results suggest that higher levels of student and parent involvement and college preparation (i.e., access

Parent-Student Discussions about College Planning

to and accuracy of information) that lead to greater parent-child communication (i.e., reaction to information or decision making) may go far in explaining college choice outcomes as a function of information gathering, quality, processing, and interpretation.

Our findings could also inform the economic and sociological approaches that focus on status attainment, since the main variables in these approaches tend to be family income and education and college aspirations. Increasingly, however, these approaches have included social capital variables into their models (Perna 2006; Sandefur et al. 2006). Our results further these more recent approaches by demonstrating that two levels of social capital may operate in the college choice process. The first level occurs when students and parents engage themselves separately in social networks and relations that include college preparation activities. The second level occurs when parents and children come together to discuss college planning, and this dyadic activity is associated with those separate involvement activities. These findings imply that the college choice process includes separate social capital-related contributions and activities by students and parents, as well as their combined social capital-related activity in the form of parent-student communication. However, we do find that student involvement is more important than parental involvement to this communication, which is an important contribution to the literature given the lack of studies on student involvement. These findings are consistent with the three-stage model of college choice that posits that students are influential in each stage of the choice process and that they begin to navigate away from parental influences especially during the eleventh and twelfth grades (Hossler and Gallagher 1987; Hossler et al. 1999).

Our study suggests that all models of college choice need to integrate an intergenerational approach. This approach would not necessarily focus only on the unique or competing influences and behaviors of students and parents separately. Instead, parents and students would be viewed as reinforcing agents. Our interaction models support this conceptualization, through which the individual behaviors and expectations of students and parents interact to reinforce each other to further enhance parent-student communication above and beyond the individual influences. These findings advance an often overlooked aspect about parental involvement within the college choice framework; that is, parental involvement is somewhat of a misnomer as it implies a one-way relationship. Instead, as argued by Smith and Fleming (2006) and Smith (2008), parents' verbal encouragements are improved when there is congruency and similarity of plans and aspirations between parents and students.

Finally, our research provides a new set of results to further inform and advance general college choice research and discourse. Specifically, the results for the control variables return some interesting findings that are somewhat at odds with existing research. It is traditionally understood that, in

general, households with two parents, higher incomes, higher education levels, English spoken fluently or as a first language, and nonracial minorities are more actively involved in their children's educational lives (Kim 2009; Vaden-Kiernan and McManus 2005). We find several exceptions to this research: (1) Hispanic families have higher levels of parent-student communication compared to white, non-Hispanic families; (2) single-parent families have greater communication levels than do two-parent biological families; and (3) households in which English is not the main language spoken at home have higher levels of parent-student communication about college planning. We do not believe that these results are unique to our study, as the NHES data are nationally representative of all civilian, noninstitutionalized students in grades 9–12 in the 50 states and the District of Columbia. Instead, we believe that our measure of parent-student communication captures a different aspect of the dynamics of college choice and parental involvement that is not usually considered in social capital or status attainment approaches or those approaches that focus on traditional measures of parental involvement.

From a practice standpoint, the direct and interaction findings can be informative at several levels, especially given that a majority of programs aimed at increasing college preparation focus solely or mainly on parental involvement, particularly parental contact with schools (Perna 2002). Our research suggests that programs may have to take the additional steps of promoting student involvement in order to enhance parent-student communication about college. This, of course, does not eliminate or reduce the need to involve parents in their children's education and college planning. At the individual level, student and parent interactions with teachers and counselors may be more beneficial if the topic of parent-student communication is addressed. We already know that high school teachers and counselors may be an important source of college-related information, especially for low-income and racial minority students (McDonough 2005). These interactions should also include concrete strategies about how to communicate this information intergenerationally, especially given that Holland (2010) suggests that such information is lost when students do not communicate with their parents.

Limitations and Future Research

There are three limitations of the current study that must be considered to fully interpret our results and to guide future research. First, it must be emphasized that the data from the NHES:99 are cross-sectional, which limits our ability to infer causation on the significant findings. The overall results support our theoretical and research arguments that parent-student discussions about college planning are a function of parents' and students' individual and

Parent-Student Discussions about College Planning

combined levels of college preparation and information gathering, college aspirations, and several measures of school and extracurricular involvement. However, it is plausible that these discussions equally predict the parent and student variables, which highlights the difficulty of using cross-sectional data to unravel dynamic and temporal processes. To test this, we estimate a series of full regression models using the parent-student discussion measure as the predictor variable (results not shown) and the parent and student measures as the outcome variables. We find that parent-student discussions significantly and positively predict the parent preparation index and the student preparation index but are not a significant predictor of parent's college aspirations, student's college aspirations, and 7 of the 10 measures of involvement. By and large, though, it appears that our regression specification is correct when we position parent-student communication as the outcome variable, although these additional analyses do support our earlier contention that college planning is an iterative and recursive process.

Second, we lack measures of school and neighborhood qualities. These are important variables, knowing the wide disparities in qualities among US school children. Indeed, research by Oakes and Saunders (2004), Oakes and Rogers (2006), and the theoretical model of Perna (2006) highlight the necessity of considering school-level characteristics when examining college access and enrollment. Oakes's research finds that high schools must have specific institutional conditions and resources in order to make college accessible for all students, such as high-quality teaching, an inclusive college-going culture, and extra support as needed. Perna et al. (2008) find that the availability and focus of college counselors vary across high schools based on levels of student achievement and socioeconomic status. In low-status schools, for example, counselors are more likely to provide information about and emphasize graduating from high school than enrolling in college. This finding is consistent with Lin (2001), who argues that school-based resources and opportunities to participate in school differ by race and social class, with poorer schools less able to offer high-quality resources and activities specific to college. This suggests that future studies will need to account for the quality of the school and neighborhood in which the student attends and their family lives, respectively (Stanton-Salazar 1997). Finally, parental involvement—and presumably family-based college planning—is influenced significantly by higher education institutions, immediate economic contexts and forces, and state-level policies (Perna 2005a; Rowan-Kenyon et al. 2008). Therefore, future research could advance our study by taking into account context and quality issues.

The final limitation concerns our outcome measure of parent-student communication about college planning. Even though we create an index of parent-student discussions, it is composed of four dichotomous measures of each topic (e.g., parents and students either talked about college type or they did not). This

largely ignores issues of frequency, depth, substantive topics, and the information-decision processes outlined by Hossler et al. (1999). If parent-student communication is to be integrated fully within the college choice and enrollment framework, future research will need to capture the more dynamic, substantive, and process-oriented features of parent-student communication about college planning. This is especially true if parent-student communication is viewed as a form of within-family social capital, with this communication providing vital and subtle resources necessary for college enrollment above and beyond parental involvement.

References

- Avery, Christopher, and Caroline M. Hoxby. 2004. "Do and Should Financial Aid Packages Affect Students' College Choices?" In *College Choices: The Economics of Where to Go, When to Go, and How to Pay for It*, ed. Caroline Hoxby. Chicago: University of Chicago Press.
- Bergerson, Amy. 2009. "College Choice and Access to College: Moving Policy, Research, and Practice to the 21st Century." *ASHE Higher Education Report* 35:1–141.
- Cabrera, Alberto F., Regina Deil-Amen, Radhika Prabhu, Patrick T. Terenzini, Chul Lee, and Robert E. Franklin Jr. 2006. "Increasing the College Preparedness of At-Risk Students." *Journal of Latinos and Education* 5:79–97.
- Cabrera, Alberto F., and Steven M. La Nasa. 2000. "On the Path to College: Three Critical Tasks Facing America's Disadvantaged." *Research in Higher Education* 42:2–38.
- Cameron, A. Colin, and Pravin K. Trivedi. 2003. "Essentials of Count Data Regression." In *A Companion to Theoretical Economics*, ed. B. H. Baltagi. Malden, MA: Blackwell.
- Carneiro, Peter, and James J. Heckman. 2002. "The Evidence on Credit Constraints in Post-Secondary Schooling." *Economic Journal* 112:705–34.
- Cho, Su-Je, Cynthia Hudley, Soyoung Lee, Leasha Barry, and Melissa Kelly. 2008. "Roles of Gender, Race, and SES in the College Choice Process among First-Generation and Nonfirst-Generation Students." *Journal of Diversity in Higher Education* 1:95–107.
- Coleman, James S. 1988. "Social Capital in the Creation of Human Capital." *American Journal of Sociology* 94:S95–S120.
- College Board. 2009. *Trends in College Pricing*. New York: College Board.
- Corwin, Zoe B., Julia E. Colyar, and William G. Tierney. 2005. "Engaging Research and Practice—Extracurricular and Curricular Influences on College Access." In *Preparing for College: Nine Elements of Effective Outreach*, ed. William Tierney, Zoe Corwin, and John Colyar. New York: SUNY Press.
- Farmer-Hinton, Raquel L. 2008. "Social Capital and College Planning: Students of Color Using School Networks for Support and Guidance." *Education and Urban Society* 41:127–57.
- Goldrick-Rab, Sara, Deborah F. Carter, and Rachelle W. Wagner. 2007. "What Higher Education Has to Say about the Transition to College." *Teachers College Record* 109: 2444–81.
- Guilamo-Ramos, Vincent, James Jaccard, Patricia Dittus, and Alida M. Bouris. 2006.

Parent-Student Discussions about College Planning

- “Parental Expertise, Trustworthiness, and Accessibility: Parent-Adolescent Communication and Adolescent Risk Behavior.” *Journal of Marriage and Family* 68:1229–46.
- Hanson, Katherine H., and Larry H. Litten. 1982. “Mapping the Road to Academe.” In *The Undergraduate Women: Issues in Educational Equity*, ed. Pamela Perun. Lexington, MA: Heath.
- Holland, Nicole E. 2010. “Postsecondary Education Preparation of Traditionally Underrepresented College Students: A Social Capital Perspective.” *Journal of Diversity in Higher Education* 3:111–25.
- Hossler, Don, John Braxton, and Georgia Coopersmith. 1989. “Understanding Student College Choice.” In *Higher Education: Handbook of Theory and Research*, vol. 4, ed. John C. Smart. New York: Agathon.
- Hossler, Don, and Karen S. Gallagher. 1987. “Studying College Choice: A Three-Phase Model and the Implication for Policy Makers.” *College and University* 2:207–21.
- Hossler, Don, Jack Schmit, and Nick Vesper. 1999. *Going to College: How Social, Economic, and Educational Factors Influence the Decisions Students Make*. Baltimore: Johns Hopkins University Press.
- Jeynes, William H. 2010. “The Salience of the Subtle Aspects of Parental Involvement and Encouraging That Involvement: Implications for School-Based Programs.” *Teachers College Record* 112:747–74.
- Kao, Grace, and Marta Tienda. 1998. “Educational Aspiration of Minority Youth.” *American Journal of Education* 106 (3): 349–85.
- Kim, Yanghee. 2009. “Minority Parental Involvement and School Barriers: Moving the Focus Away from Deficiencies of Parents.” *Education Research Review* 4:80–102.
- Kinzie, Jillian, Megan Palmer, John Hayek, Don Hossler, Stacy A. Jacob, and Heather Cummings. 2004. *Fifty Years of College Choice: Social, Political, and Institutional Influences on the Decision-Making Process*. Indianapolis: Lumina Foundation.
- Kotler, Philip, and Karen F. A. Fox. 1985. *Strategic Marketing for Educational Institutions*. Englewood Cliffs, NJ: Prentice-Hall.
- Lin, Nan. 2001. *Social Capital: A Theory of Social Structure and Action*. New York: Cambridge University Press.
- MacAllum, Keith, Denise M. Glover, Barbara Queen, and Angela Riggs. 2007. *Deciding on Postsecondary Education: Final Report*. Washington, DC: National Postsecondary Education Cooperative.
- McCarron, Graziella Pagliarulo, and Karen Kurotsuchi Inkelas. 2006. “The Gap between Educational Aspirations and Attainment for First-Generation College Students and the Role of Parental Involvement.” *Journal of College Student Development* 47: 534–49.
- McDonough, Patricia M. 2005. “Counseling Matters: Knowledge, Assistance, and Organizational Commitment in College Preparation.” In *Preparing for College: Nine Elements of Effective Outreach*, ed. William Tierney, Zoe Corwin, and John Colyar. New York: SUNY Press.
- Mortimer, Jeylan T. 2005. *Working and Growing Up in America*. Cambridge, MA: Harvard University Press.
- NCES (National Center for Education Statistics). 2000. *NHES: 1999 Methodology Report*. Washington, DC: US Department of Education.
- Oakes, Jeannie, and John Rogers. 2006. *Learning Power: Organizing for Education and Justice*. New York: Teachers College Press.
- Oakes, Jeannie, and Marisa Saunders. 2004. “Education’s Most Basic Tools: Access

- to Textbooks and Instructional Materials in California's Public Schools." *Teachers College Record* 106:1967–88.
- Park, Hyunjoon. 2008. "The Varied Effects of Parent-Child Communication: A Comparative Study of Fourteen Countries." *Comparative Education Review* 52 (2): 219–43.
- Perez, Patricia A. 2010. "College Choice Process of Latino Undocumented Students: Implications for Recruitment and Retention." *Journal of College Admissions* 206:21–25.
- Perna, Laura W. 2002. "Pre-College Outreach Programs: Characteristics of Programs Serving Historically Underrepresented Groups of Students." *Journal of College Student Development* 43:64–83.
- Perna, Laura W. 2005a. "A Gap in the Literature: The Influence of the Design, Operations, and Marketing of Student Aid Programs on College-Going Plans and Behaviors." *NASFAA Journal of Student Financial Aid* 35:7–15.
- Perna, Laura W. 2005b. "The Key to College Access: Rigorous Academic Preparation." In *Preparing for College: Nine Elements of Effective Outreach*, ed. William Tierney, Zoe Corwin, and John Colyar. New York: SUNY Press.
- Perna, Laura W. 2006. "Studying College Choice: A Proposed Conceptual Model." In *Higher Education: Handbook of Theory and Research*, vol. 21, ed. John C. Smart. New York: Springer.
- Perna, Laura W. 2007. "The Sources of Racial-Ethnic Group Differences in College Enrollment: A Critical Examination." *New Directions for Institutional Research* 133:51–66.
- Perna, Laura W., Heather T. Rowan-Kenyon, Scott L. Thomas, Angela Bell, Robert Anderson, and Chunyan Li. 2008. "The Role of College Counseling in Shaping College Opportunity: Variations across High Schools." *Review of Higher Education* 31: 131–59.
- Perna, Laura W., and Marvin A. Titus. 2005. "The Relationship between Parental Involvement as Social Capital and College Enrollment: An Examination of Racial/Ethnic Group Differences." *Journal of Higher Education* 76:485–518.
- Plank, Stephen B., and Will J. Jordan. 2001. "Effects of Information, Guidance, and Actions on Postsecondary Destinations: A Study of Talent Loss." *American Educational Research Journal* 38:947–79.
- Pong, Suet-ling, Lingxin Hao, and Erica Gardner. 2005. "The Roles of Parenting Styles and Social Capital in the School Performance of Immigrant Asian and Hispanic Adolescents." *Social Science Quarterly* 86:928–50.
- Rowan-Kenyon, Heather T., Angela D. Bell, and Laura W. Perna. 2008. "Contextual Influences on Parental Involvement in College Going: Variations by Socioeconomic Class." *Journal of Higher Education* 79:564–86.
- Sandefur, Gary D., Ann M. Meier, and Mary E. Campbell. 2006. "Family Resources, Social Capital, and College Attendance." *Social Science Research* 35:525–53.
- Shaw, Emily J., Jennifer L. Kobrin, Sheryl F. Packman, and Amy Elizabeth Schmidt. 2009. "Describing Students Involved in the Search Phase of the College Choice Process: A Cluster Analysis Study." *Journal of Advanced Academics* 20:662–700.
- Smith, Michael J. 2008. "College Choice Process of First Generation Black Female Students: Encouraged to What End?" *Negro Educational Review* 59:147–61.
- Smith, Michael J., and Michael K. Fleming. 2006. "African American Parents in the Search Stage of College Choice: Unintentional Contributions to the Female to Male College Enrollment Gap." *Urban Education* 41:71–100.
- Somers, Patricia, James Cofer, and Jim VanderPutten. 2002. "The Early Bird Goes to College: The Link between Early College Aspirations and Postsecondary Matriculation." *Journal of College Student Development* 43:93–107.

Parent-Student Discussions about College Planning

- Stanton-Salazar, Ricardo D. 1997. "A Social Capital Framework for Understanding the Socialization of Racial Minority Children and Youths." *Harvard Educational Review* 67:1-40.
- Stinchcombe, Arthur L. 1990. *Information and Organizations*. Berkeley: University of California Press.
- Tierney, William G., Zoe B. Corwin, and Julia E. Colyar, eds. 2005. *Preparing for College: Nine Elements of Effective Outreach*. New York: SUNY Press.
- Vaden-Kiernan, Nancy, and John McManus. 2005. *Parent and Family Involvement in Education: 2002-2003*. Washington, DC: National Center for Education Statistics.