UNANTICIPATED EDUCATIONAL CONSEQUENCES OF A POSITIVE PARENT-CHILD RELATIONSHIP[*]

by

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RUNNING HEAD: UNANTICIPATED EDUCATIONAL CONSEQUENCES

Word Count: 6,802

January 2008

[*] We thank Brian An, Jill Bowdon, Jorge Chapa, Mustafa Emirbayer, Anna Haskins, John Levi Martin, and Marta Tienda for their helpful insights and are obliged to James Beaudoin and Bill Buckingham at the University of Wisconsin Applied Population Lab for their technical assistance. This research was supported by grants from the Ford, Mellon, Hewlett, and Spencer Foundations, the National Science Foundation (GRANT # SES-0350990), and received institutional support from the Office of Population Research at Princeton University (NICHD Grant # R24 H0047879). Some of the data used for this study are restricted and, therefore, not available from the authors. Please direct all correspondence to Ruth López Turley, Department of Sociology, University of Wisconsin — Madison, 1180 Observatory Drive, Madison, Wisconsin, 53706-1393, USA.

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ABSTRACT

If today there exists a single transcendent idea about the nature of social reality, it is that a positive parent-child relationship improves children's chances of succeeding in school. However, this paper demonstrates that a positive parent-child relationship can exert a positive effect on one proximate educational outcome while inadvertently exerting a negative effect on another, more distant, educational outcome. Specifically, using data from the Texas Higher Education Opportunity Project, the researchers find that while strong, positive parent-child relations are associated with better academic achievement at the secondary level, they are also associated with an increased desire to live at home during college, which in turn decreases students' chances of enrolling in a four-year college. These findings demonstrate that positive family dynamics can influence educational outcomes in potentially divergent (and unanticipated) directions.

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INTRODUCTION

If today there exists a single, clear and transcendent idea about the nature of social reality, it is that a "good" family—one comprised, at minimum, of a parent or set of parents who has a positive relationship with their children—helps one to succeed in this world. Nowhere is this more salient than in our notions of the intimate connection between family dynamics and educational achievement and attainment. Psychologists long have claimed that nurturing parenting styles bolster children's competence and success in school (Baldwin 1948; Sears et al. 1957). And at least since the publication of Peter Blau and Otis Dudley Duncan's *The American Occupational Structure* (1967), sociologists have underscored a positive association between an affirming family life and children's well-being, including their adult quality of life (e.g., their earnings and educational attainment).

When parents actively involve themselves in their children's lives—when they monitor their progress, pay attention to their moods and struggles, and communicate openly and frequently with them—their children reap high educational rewards (Heymann and Earle 2000; Mullis, Rathge, and Mullis 2003). Positive parenting techniques can soften the negative effects of economic disadvantage (Crosnoe, Mistry, and Elder 2002), and a secure and emotionally healthy home life facilitates students' success in the classroom (Durkin 1995). Studies have demonstrated that the frequency of parent-to-child communication, as well as the encouraging nature of that communication, is strongly correlated with children's intellectual development, language acquisition, and academic achievement (Brooks-Gunn and Markman 2005; Hart and Risley 1995). The academic achievement of children with neglectful parents, on the other hand,

is far lower than that of students whose parents are involved in their development (Jeynes 2005; Muller 1993).[1] The social-scientific evidence points to a clear conclusion: Students benefit considerably from a positive, well-developed relationship with their parents.

Perhaps it is not surprising that the vast majority of studies investigating the link between the parent-child relationship and educational outcomes has concentrated on academic achievement at the primary and secondary levels, when children are attending school while living with their parents. However, our knowledge of the relationship between two of society's most powerful civilizing institutions—home and school—remains underdeveloped with respect to postsecondary educational outcomes. It is well documented that a strong parent-child relationship helps students excel in primary and secondary school, but is it positively associated with college enrollment?

There is good reason to expect as much—because the positive association between the parent-child relationship and educational success is so pronounced at the elementary and secondary levels; because students with healthy, intimate relationships with their parents collect better grades and higher test scores, compared to their peers with poor relationships with their parents (Spera 2005; Steinberg et al. 1992); and because parental involvement does not seem to wane as children grow into adolescents (Astone and McLanahan 1991; Glasgow et al. 1997). However, there are equally compelling reasons to expect that a positive parent-child relationship actually is negatively correlated with college enrollment. Just as a baby finds it harder to wean herself if her mother's milk is sweet, the supported and esteemed child may find it difficult to leave home to attend college.

[1] In a related vein, the literature finds a positive association between familism and educational aspirations and expectations (Pribesh and Downey 1999; Quian and Blair 1999). Researchers have found that, when it comes to educational outcomes, familism mitigates the negative experiences associated with minority status (Ream 2005; Zhou and Bankston 1998); and some have documented a positive relationship between familism and high school completion among "at risk" youth (Furstenberg and Hughes 1995).

Tinto's Separation Thesis

In *Leaving College* (1993), Vincent Tinto, building off Dutch anthropologist Arnold van Gennep's (1960 [1909]) theory of rites of passage, postulates that a successful college student must execute a break from past acquaintances and intimates "most typically associated with the family, the local high school, and local areas of residence" (95). The first step toward a fruitful college career, reasons Tinto, is that of separation, of denying, at least in part, familiar modes of thinking and interacting rooted in one's upbringing—as well as familiar people, especially family members. We refer to this idea as Tinto's separation thesis.

Tinto's separation thesis is accompanied by two subsequent stages—transitioning from high school to college and incorporating oneself into college society—that, together, comprise a theory that seeks to isolate "the interactional roots of the *early stages of withdrawal from institutions of higher education*" (Tinto 1993: 95, emphasis in original). According to a recent review (Kuh et al. 2006: 11), this theory has ascended to "near paradigmatic status;" however, with only a handful of minor exceptions (e.g., Elkins, Braxton, and James 1997), Tinto's theory has not been subjected to much empirical testing. Nor has the most provocative idea of Tinto's theory, his separation thesis, been marshaled to help explain college enrollment patterns—as the idea originally was developed to help identify the causes of college attrition.

This paper, then, seeks to expand and enrich Tinto's separation thesis in two ways: (1) by analyzing it through empirical testing and (2) by employing it when examining the association between the parent-child relationship and college enrollment. While conventional sociological and psychological models predict that a positive parent-child relationship promotes academic achievement and attainment and, thus, should be associated with increased college enrollment, Tinto's separation thesis predicts that a positive parent-child relationship makes it harder for

students to distance themselves from family life and thus deters students from enrolling in college, net of their ability and track record. Drawing on data from the Texas Higher Education Opportunity Project, this article provides empirical support for Tinto's separation thesis.

Our main finding is simple: As expected, students who have strong and encouraging relationships with their parents perform better in high school than those who do not; however, these students also form a stronger attachment to their family, manifest in their increased desire to stay home during college, which in turn decreases their chances of enrolling in college. Far from producing uniform effects across time and space, a positive and supportive parent-child relationship can exert a positive effect on one (proximate) educational outcome while inadvertently exerting a negative effect on another (more distant) educational outcome (see Figure 1 below). Whereas the conventional model assumes that a family's supportiveness is positively correlated with virtually all measures of educational attainment and achievement, our findings present a more complicated picture, one in which children from well-meaning, nurturing families are advantaged when it comes to high school performance but disadvantaged when it comes to college enrollment. Thus, a warm, encouraging household might help produce high achievers at the secondary level but underachievers at the collegiate level.

[Figure 1 about here.]

DATA & METHODS

This study draws on data from the Texas Higher Education Opportunity Project (THEOP, Senior Cohort, Waves 1 and 2), a survey of high school seniors' transition to college. The sample is comprised of 13,803 seniors attending 96 Texas public high schools in the spring of 2002.[2] Students were selected through stratified random sampling and surveyed during their last

[2] All public high schools in Texas were included in the sampling frame except charter schools, special education schools, and schools with fewer than 10 seniors.

semester in high school—a time when post-graduation plans, for most, should have been solidified. Data were collected through self-administered surveys, which, for the most part, were completed during class time (a small number of surveys were mailed to students).

Parent-Child Relationship Scale

The THEOP survey includes a set of nine statements regarding students' relationships with their parents/guardians, statements students evaluated by marking strongly disagree, disagree, agree, or strongly agree. The items, which included statements such as "I like to get my parents'/guardians' point of view on things I'm concerned about" and "I tell my parents/guardians about my problems and troubles" (see Table 1), were combined to form a standardized scale, which we refer to as the parent-child relationship scale (PCR). In order to obtain the highest possible scale reliability coefficient ($\alpha = 0.88$), three items with low item-test and item-rest correlations were excluded: "My parents/guardians expect too much from me," "I don't get much attention from my parents/guardians," and "At least one of my parents/guardians is home when I get home from school." Thus, our parent-child relationship scale coalesces six items dealing with students' perceptions of their relationship with their parents, focusing on the degree to which students believe their parents accept them, communicate with them, and know about their hardships. Additionally, since we focus on the parent-child relationship, we take account of whether students lived with their mother, their father, a female guardian, or a male guardian. We also consider the number of times students changed schools, since family instability is associated with lower academic achievement (Martinez and Forgatch 2002; Pong and Ju 2000).

[Table 1 about here.]

Student-reported data, like parent-reported data, is hardly free of bias. Parents' and

students' perceptions of similar phenomena can diverge in significant ways, and, unfortunately, our data do not allow us to corroborate students' responses with parents'. Only careful, first-hand observation of interactions between children and parents could tender an objective account of the parent-child relationship (cf. Brooks-Gunn and Markman 2005; Caldwell and Bradley 1984; Lareau 2003). Nevertheless, student-reported information is an important data source worthy of serious treatment. One cannot hope to understand how students respond to a relationship without taking into account how they perceive that relationship. For our purposes, we hope to determine how students' evaluations of their relationship with their parents affect certain outcomes. What is more, students' perceptions of their relationship with their parents offer a glimpse, however incomplete, into actual household dynamics. As one team of researchers has pointed out, "the subjective image of parenting styles reported by adolescents provides one window through which to view the internal dynamics of the family environment" (Glasgow et al. 1997: 512).

In a similar vein, we should emphasize that our parent-child relationship scale is a measure of the quality of the parent-child relationship, not the degree to which parents are directly involved in their children's school work. Like the parent-child relationship, parental involvement has been shown to increase students' educational performance at the elementary (Hara and Burke 1998) and high school levels (Otto and Atkinson 1997), to curb behavioral problems (Amato and Rivera 1999), to lower the likelihood of dropping out (McNeal 1999), and to bolster students' drive (Griffith 1999). However, we found that lower achieving students indicated that their parents were significantly more involved in their school work. This is not surprising, given that many of the parental involvement questions in the THEOP survey are conditional on poor performance. For example, students were asked, "How often do your

parents or guardians …remind you to do your homework *if you forget*? …try to make you work harder *if you get bad grades*? …know when you are *having trouble with your homework*?" As a result, the THEOP measure of parental involvement does not capture parents' proactive participation, as would questions dealing with the degree to which parents volunteer at school or participate in parent teacher conferences (Epstein 1995), but rather their responses to children in need of remedial intervention. Therefore, we do not use this measure of parent involvement in our analyses (cf. Hill 2001).

Proximate and Distant Educational Outcomes

To explore how the quality of the parent-child relationship affects students' educational outcomes, we investigate the relationship between the PCR scale and (1) academic achievement in high school, (2) the desire to live at home during college (both proximate outcomes), and (3) enrollment in a four-year college one year later (a more distant outcome). The first outcome, academic achievement, is a standardized measure of grades and class rank. Grades were calculated as the average grade in English, Math, Science, and History/Social Science during the most recent grading period (1 = lower than C, 2 = C, 3 = B, 4 = A). We also focus on class rank because of its special importance in Texas, where students in the top 10% of their class are guaranteed admission to any of the state's public colleges and universities. Students who did not know their rank (about 39% of the sample) were asked to provide their best estimate, yielding a response rate of 97%. For ease of interpretation, we reverse coded class rank, so that higher values refer to a better rank. Then, grades and rank were standardized (mean = 0, standard deviation = 1) and averaged.

The second proximate outcome, the desire to live at home during college, is based on the question, "In choosing a college or university to attend, how important to you are/were each of

the following? . . . Ability to attend school while living at home." Approximately 61% of the students responded that the ability to attend school while living at home was somewhat or very important. About 6% of students indicated they did not aspire or expect to continue their education beyond high school and therefore were not asked about their preference to live at home during college. Because students without college plans and those who had dropped out of high school before their senior year were systematically excluded, our findings may be somewhat conservative. Finally, the more distant outcome, college enrollment, was measured about a year after high school graduation, when respondents were asked if they had enrolled in a bachelor's degree program since September 2002.

Explaining Separation

There are several factors that facilitate the separation described by Tinto as a necessary precursor to a successful college career—and we take into account many of them. First, many researchers have demonstrated that parents' education and socioeconomic status (SES) affects how they socialize their children to education (Crosnoe et al. 2002; Lareau 2003; Lee and Bowen 2006). A parent familiar with college, as well as one prepared to pay for it, might be better able to groom a child for separation than a parent lacking a postsecondary education or means to pay for the high costs of college. As Tinto (1993: 97) remarked, "For many individuals from college educated families, the transition to college may be an accepted, indeed encouraged, movement that most persons are expected to make in the course of their adult lives." Accordingly, we incorporate socioeconomic status into our models, using parents' education (the highest level completed by either parent or guardian), together with home ownership.[3]

Second, parental aspirations and educational goals are directly linked to their children's

[3] As a rule, most adolescents cannot provide an accurate estimate of their parents' income; accordingly, these students were not asked to report it.

academic aspirations, achievement, and attainment (Coleman 1988; Perna and Titus 2005). It is safe to reason that children will find it easier to separate from their parents if the latter encourages separation on account of college enrollment. For these reasons, we consider parents' aspirations: namely, if they encouraged their children to go to college. Not surprisingly, virtually all students in our dataset had parents who encouraged them to go to college. Accordingly, to make this variable more meaningful, we distinguish not only between students whose parents encouraged them to attend college and those whose parents did not (6%), but also between students whose parents listed college as one of several options (e.g., entering the military, attending a trade school, getting a job) (70%) and those whose parents encouraged college attendance alone (24%). We have selected the largest group as the reference category.

Third, students' membership in marginalized groups might exacerbate their chances of successfully separating from their familiar associations and transitioning into college. "Foreign students, students from very small rural communities, and students from distinct social, ethnic, or religious communities may also find separation particularly difficult," wrote Tinto (1993: 96-97). "For them, separation may represent a major shift in the way they construct their daily lives." As such, we consider student characteristics, including their gender, foreign-born status, race/ethnicity, and whether they aspire and expect to complete a four-year college degree. Aspirations are based on how far students would *like* to go in school, while expectations are based on how far they *think* they will go (emphases in questionnaire).

Table 2 lists all the variables used in our analyses, including the percentage of missing values for each variable. College enrollment has much more missing data than other variables because it was measured during the second wave of data collection. As a result, missing values for all variables were estimated using multiple imputation, a technique that aims to preserve the

characteristics of the dataset as a whole (instead of specific variables) and that is appropriate for addressing various types of missing data, both those missing at random and those not missing at random (Schafer and Graham 2002). Five equally plausible complete datasets were constructed from information obtained from the observed data (from a total of 1,000 iterations), since accurate results typically can be obtained from five to ten imputations (Schafer 1999). All statistical analyses were repeated on each of these datasets, producing five sets of results that were combined using Rubin's rule of combination.

[Table 2 about here.]

In what follows, we use ordinary least squares and logistic regression to explore the relationship between the parent-child relationship and proximate and distant educational outcomes. We begin by comparing the effect of the parent-child relationship on students' academic achievement in high school with its effect on students' desire to live at home during college. We then investigate how achievement and desire to stay at home affects college enrollment a year later.

RESULTS

As expected, students who evaluate their relationship with their parents in a more positive light tend to have higher academic achievement, at least in terms of grades and high school class rank. Table 3 shows that, after controlling for demographic and socioeconomic factors, there is a positive and significant association between PCR and academic achievement. Other factors associated with significantly higher achievement in high school include having a mother and father in the household, fewer moves to different schools, parents with college experience, parents who encouraged college only, being female and white, and aspiring and expecting to finish college. Most importantly, this regression suggests that students tend to perform better in

high school when they have a positive relationship with their parents—parents who, according to their children, do a good job of parenting, can tell when their children are upset, can discuss their children's problems with them, and so forth.

[Table 3 about here.]

However, a positive parent-child relationship also increases the likelihood that students will want to stay home for college, which in turn decreases their chances of enrolling in college a year later. Table 3 shows that, net of other factors, improving the parent-child relationship by a standard deviation increases the likelihood of wanting to live at home during college by about 22% ($\exp^{0.20}$). Students with better relations with their parents are more likely to want to extend their time at home through the college years. Of course, there are many reasons why students may prefer to stay at home. Table 3 shows that the students most likely to want to live at home during college include those whose parents are disadvantaged socioeconomically, those who were born outside the U.S., those who are nonwhite, and those who do not aspire or expect to finish college. In fact, regardless of demographic and socioeconomic factors, Hispanic students are 2.2 ($\exp^{0.76}$) times as likely as whites to state that it is important for them to stay home for college, a finding that complements prior research on Hispanic familism (Desmond and Turley 2007; Marin and Marin 1991). In addition, students whose parents encouraged college attendance alone were less likely to prefer to stay home for college than students whose parents encouraged them to consider college as but one of several options (perhaps because the other options were local); and students whose parents did not encourage college attendance also were less likely to want to stay home for college. Most importantly, taking account of all of these factors, a positive parent-child relationship is associated with a significantly increased likelihood of wanting to stay home for college.

Furthermore, after controlling for demographic, socioeconomic, and academic factors, Table 3 shows that students who report that it is important for them to live at home during college are about 42% ($1-\exp^{-0.54}$) less likely to enroll in a four-year college than their peers who report that staying home is not important. In contrast, a standard deviation of improved high school achievement is associated with a 67% ($\exp^{0.52}$) increase in the likelihood of enrolling in college. Both these effects are statistically significant, suggesting that there are two contrasting patterns. On the one hand, a positive parent-child relationship is associated with a better high school academic achievement that in turn is associated with a higher likelihood of enrolling in a four-year college. On the other hand, a positive parent-child relationship also is associated with an increased likelihood of wanting to live at home during college, which in turn is associated with a lower likelihood of enrolling in a four-year college. In fact, after controlling for relevant demographic and socioeconomic attributes, our parent-child relationship scale exerted *no significant effect* on college enrollment, a finding that challenges other sociological accounts (cf. Crosnoe et al. 2002; Perna and Titus 2005) as well as the conventional wisdom regarding the importance of the parent-child relationship in determining educational outcomes.

DISCUSSION & CONCLUSION

This paper set out to determine if a positive parent-child relationship advantages or disadvantages students when it comes to college enrollment. Overwhelmingly, scholars examining elementary and high school students have concluded that students benefit in a panoply of ways from a positive parent-child relationship (Xitao and Chen 2004). Our study supports these findings, demonstrating that a strong, supportive parent-child relationship is positively correlated with higher achievement. However, it also finds that as children's evaluations of their parents grow more positive, their desire to stay at home during college

increases, which, in turn, decreases their chances of enrolling in college. This finding lends support to Tinto's (1993) separation thesis: Children more strongly connected to their parents find it difficult to enact the ever-important break from former associations and lifestyles, a break that is fundamental if one wishes to enroll and excel in college.

Positive family ties can exert a variety of effects that simultaneously influence individual outcomes in divergent directions. When it comes to students' educational advancement, a positive parent-child relationship might be simultaneously beneficial and harmful.[4] There are useful implications here for the way social scientists conceptualize the relationship between family life and educational outcomes. The parent-child relationship and educational outcomes are not always bound together in a simple monotonic relationship; in some cases, supportive and invested parents do not bring about positive educational outcomes for their children. We speak here not of exceptions to the rule but of systematic patterns identified in our data. Supportive parents might nourish in their children two loyalties—that to school and to family. Although these loyalties can coexist harmoniously while students remain in primary and secondary school, they suddenly find themselves at stark odds during the transition to college. In particular, positive parenting might produce the successful high school student who has no intention of leaving home to attend college, even in states like Texas, where admission for top graduates is guaranteed. Such self-enforced limitations could force students (including high achievers) to attend low-quality institutions close to home rather than top-notch institutions further away, or, worse, they could discourage students from going to college altogether.

[4] It is important to note that living at home during college is not a negative outcome in and of itself. When students remain at home upon graduating from high school, their families may benefit from having an additional wage earner in the household; their younger siblings and other relatives may benefit from having an additional caregiver; and their communities may benefit from having an additional worker and citizen. The students themselves may benefit from remaining embedded in tight friendship and kinship networks while transitioning into adulthood. Of course, in an equal number of cases, the opposite may be true. The strains adult-age children place on their family's resources might outweigh their contributions to them; and, should they continue their education at a local postsecondary institution, familistic obligations might infringe on students' studies and deflate their aspirations (cf. Dubas and Petersen 1996; White and Lacy 1997).

Since Diana Baurmind (1971) developed her typology of parenting styles, psychologists have argued that "authoritative parents"—those who provide their children with an effective balance of support and structure, warmth and discipline, who are invested in and responsive to their children's needs—advantage their children in school vis-à-vis those who adopt other parenting styles (e.g., indulgent, uninvolved, authoritarian) (Glasgow et al. 1997; Spera 2005). Because this line of research has been relegated to examining educational outcomes at the primary and secondary levels, we believe future studies could harvest valuable insights if they extended Baurmind's typology to analyzing the correspondence between parenting styles and postsecondary educational outcomes, employing carefully-designed psychological indexes (e.g., Steinberg et al. 1994) that generate refined measures of parenting practices, indexes to which we did not have access in this study.

We also encourage social scientists to evaluate the findings of this study through research that draws on more nationally-representative datasets. Texas is a peculiar state with respect to the analyses pursued here. There is, first, its racial and ethnic composition. Texas has a Hispanic population above the national average; in fact, over a third of the students in this sample are Hispanic, and, relative to white students, Hispanic students tend to have lower academic achievement and are significantly more likely to want to live at home during college. (Note, however, that our key finding remains after taking into account our sample's racial and ethnic composition.) Second, with respect to Texas' "Top 10% Law," we might expect students living in a state that guarantees college admission to graduates in the top decile of their class to enroll in college at higher rates than students living in states that do not offer this incentive (Tienda, Cortes, and Niu 2003). This would mean that our estimates of the likelihood of enrolling in college are conservative. Another factor that most likely biases our findings in this

direction is the fact that our sample is overwhelmingly urban (approximately 90% of the students live in urban areas). Although this proportion closely resembles that of the American population—according to the U.S. census (2003), 80% of Americans live in metropolitan areas—we would expect the relationship between students' propensity to remain at home during college and college enrollment rates to be even more significant when measured with data that include a good number of students from rural areas.

"Paradoxes," wrote Granovetter (1973: 1378), who knew better than anyone the weakness of strong ties, "are a welcome antidote to theories which explain everything all too neatly." Through our research, a paradox has come to light: strong family ties, considered vital to a child's success in school, can serve as an impediment to a child's educational attainment. Parents who strive to develop an encouraging and communicative relationship with their children might produce a high school honors student but not a four-year college graduate. Such a finding complicates our current wisdom about the interaction between family ties and educational outcomes. It also harkens back to a sociological tradition—neglected by many subfields of the discipline—that endorses a science that seeks out the unanticipated consequences of action (Coser 1969; Merton 1936), a tradition that encourages researchers to look beyond a single consequence of social action and, instead, to pay heed to "the plural effects that flow from any act" (Dewey 2002 [1922]: 229). After all, as we have seen here, a proximate educational outcome of a certain social relationship may be quite dissimilar to a more distant educational outcome brought about by the very same relationship.

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Table 1. Items on the parent-child relationship scale (PCR)

	strongly disagree	disagree	agree	strongly agree
My parents/guardians do a good job as parents	3.04	4.40	33.68	58.87
My parents/guardians accept me as I am	3.20	8.86	33.16	54.79
I like to get my parents'/guardians' point of view on things I'm concerned about	5.70	16.83	44.67	32.80
My parents/guardians can tell when I'm upset about something	4.89	12.97	42.69	39.45
When we discuss things, my parents/guardians consider my point of view	9.28	22.37	47.93	20.42
I tell my parents/guardians about my problems and troubles	15.52	27.38	38.21	18.89
Scale reliability coefficient				0.88

Source: THEOP 2002 Seniors Wave 1

The following items were excluded due to low item-test and item-rest correlations: "My parents/guardians expect too much from me," "I don't get much attention from my parents/guardians," and "At least one of my parents/guardians is home when I get home from school"

Table 2. Summary Statistics (N=13,803), Multiple Imputation[a]

	% missing	mean	std err
Outcome Variables			
HS achievement[b]	0.96	-0.01	0.01
college-at-home preference	15.19	0.58	0.00
enrolled in BA/BS program	57.72	0.45	0.00
Predictor Variables			
parent-child relationship scale	6.48	0.00	0.01
parent involvement in school work scale	5.07	0.00	0.01
mother in household	13.26	0.88	0.00
father in household	13.26	0.66	0.00
female guardian in household	13.26	0.04	0.00
male guardian in household	13.26	0.11	0.00
number of times changed schools	15.82	1.73	0.02
parents own home	17.18	0.81	0.00
parents <HS (reference)	19.60	0.13	0.00
parents HS grad	19.60	0.21	0.00
parents some col	19.60	0.27	0.00
parents col grad	19.60	0.22	0.00
parents grad deg	19.60	0.17	0.00
parents discouraged/said nothing about college	5.12	0.06	0.00
parents encouraged college & other (reference)	5.12	0.70	0.00
parents encouraged college only	5.12	0.24	0.00
female student	12.70	0.52	0.00
foreign born student	11.61	0.16	0.00
white student (reference)	12.45	0.42	0.00
black student	12.45	0.13	0.00
hispanic student	12.45	0.36	0.00
other student	12.45	0.09	0.00
student aspires to finish college	15.08	0.78	0.00
student expects to finish college	17.68	0.72	0.00

Sources: THEOP 2002 Seniors Waves 1 & 2

[a]Five datasets were combined using Rubin's rule of combination.

[b]Achievement is a standardized measure of GPA and class rank.

Table 3. Regressions (N=13,803)[a]

	Proximate Outcomes						Distant Outcome		
	HS Achievement[b]			College-at-Home Pref			College Enrollment		
	Coef	RSE[c]		Coef	RSE[c]		Coef	RSE[c]	
HS achievement[b]							0.52	0.03	***
college-at-home preference							-0.54	0.06	***
parent-child relationship scale	0.07	0.01	***	0.20	0.03	***	-0.01	0.04	
mother in household	0.08	0.02	***	-0.04	0.07		0.23	0.08	**
father in household	0.09	0.02	***	-0.02	0.06		0.14	0.09	
female guardian in household	0.02	0.04		-0.05	0.10		-0.15	0.14	
male guardian in household	-0.03	0.03		-0.07	0.08		-0.15	0.07	
number of times changed schools	-0.02	0.00	***	0.00	0.01		-0.04	0.01	**
parents own home	0.02	0.03		-0.19	0.07	*	0.11	0.06	*
parents <HS	ref			ref			ref		
parents HS grad	-0.04	0.03		0.07	0.09		-0.17	0.10	
parents some col	0.05	0.02	*	-0.16	0.07	*	0.00	0.08	
parents col grad	0.09	0.03	***	-0.49	0.09	***	0.29	0.08	**
parents grad deg	0.14	0.03	***	-0.77	0.08	***	0.25	0.11	*
parents discouraged/said nothing about college	-0.07	0.03		-0.32	0.10	***	-0.19	0.13	
parents encouraged college & other	ref			ref			ref		
parents encouraged college only	0.26	0.01	***	-0.82	0.04	***	0.41	0.06	***
female student	0.19	0.02	***	-0.01	0.05		-0.02	0.06	
foreign born student	0.00	0.02		0.48	0.08	***	-0.15	0.06	*
white student	ref			ref			ref		
black student	-0.27	0.04	***	0.20	0.09	*	0.15	0.07	*
hispanic student	-0.19	0.03	***	0.76	0.08	***	-0.02	0.07	
other student	0.04	0.04		0.45	0.11	***	0.25	0.08	**
student aspires to finish college	0.20	0.03	***	-0.20	0.07	**	0.56	0.15	**

student expects to finish college	0.39	0.03	***	-0.54	0.08	***	0.86	0.12	***
constant	-0.68	0.05	***	1.23	0.13	***	-1.45	0.14	***

* p < .05 ** p < .01 *** p < .001

Source: THEOP 2002 Seniors Waves 1 & 2

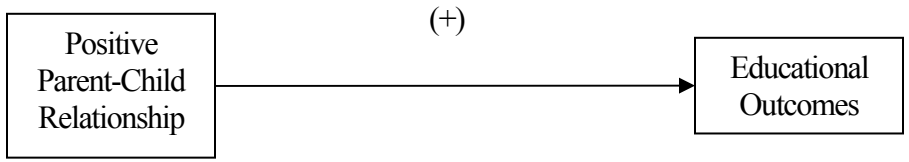
[a]Missing values were imputed using multiple imputation (5 datasets created).

[b]Achievement is a standardized measure of GPA and class rank.

[c]Standard errors adjusted for clustering.

Figure 1. Proposed Model of Dynamic Effects of the Parent-Child Relationship on Proximate and Distant Educational Outcomes

I. Conventional Model



II. Proposed Model