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ABSTRACT

The effects of family background characteristics (family income, parents' marital status, parents' education, and number of children already enrolled in postsecondary education) upon parents' postsecondary educational plans for their children, parents' saving for their children, and the amount of planning parents do with their children are examined. The influence of these factors on students' educational plans are discussed. The sample for this study was drawn from all students attending 21 Indiana high schools. Families of ninth grade students were mailed a packet with two survey instruments (for parents and students). A second mailing, a month later, contained additional surveys for parents and students. The results indicate that parents' influences on students' aspirations were both complex and varied. The level of father's education exerted the strongest indirect and direct effects on students' postsecondary education plans, but the effects of the level of fathers' and mothers' education varied for male and female ninth grade students. Neither discussion with parents about postsecondary education nor parental level of saving had major direct effects on the aspirations of male students, but for female students, the frequency with which they discussed college with their parents had a negative effect on their educational plans. Coming from single parent families had a relatively small effect. Findings suggest there could be subtle differences within each family affecting male and female students. Contains 36 references. (SM)

Differences in Family Influences on College Attendance Plans for Male and Female Ninth Graders

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Differences in Family Influences on College Attendance Plans for Male and Female Ninth Graders

With the declining pool of high school graduates and the increasing state and federal role in financing college attendance, institutional, state and federal policy makers have become interested in the topic of student college choice. Institutional policy makers are concerned with what they can do to attract desirable high school graduates to their campuses. State and federal policy makers are concerned with the effective utilization of financial aid awards as well as with aggregate postsecondary enrollments.

Although a number of studies have investigated the correlates of postsecondary enrollments (see for example Brown, 1982; Jackson, 1986; Parents, Programs and Pennsylvania Students, 1984; Trent and Medsker, 1967) or focused upon the factors that influence the decision to attend a specific postsecondary educational institution (see for example Litten, et al., 1983; Maguire and Lay, 1981; Chapman and Jackson, 1987), few of these studies have been grounded in a theoretical model of student college choice.

Hossler, Braxton, and Coopersmith (in press) identified several types of college choice models. These included: econometric models, consumer models, sociological models and combined models (which drew upon constructs found in econometric, consumer, or sociological models). Each type of model postulated

that a set of factors determined outcomes of college choice. Econometric models assumed that each individual student would attend a postsecondary educational institution if the perceived benefits of attendance outweighed the perceived benefits of non-college alternatives. Econcometric models hypothesized that the following factors affected the college choice process: expected costs (direct and indirect), expected future earnings, student background characteristics, high school characteristics, and college characteristics. Several econometric models of college choice have been developed which employ these factors to predict the likelihood of college attendance (Kohn, Manski, & Mundel, 1976; Bishop, 1977; Nolfi, et al., 1978; Fuller, Manski & Wise, 1982; Manski & Wise, 1983).

The consumer model viewed college choice from a marketing perspective. Young and Reyes (1987) developed a consumer model of college choice which required students to estimate a minimal degree of costs and risks associated with college enrollment. Kotler and Fox (1985) also viewed college choice from the perspective of risks and costs. Their model included four stages: 1) need arousal, when an initial interest in college was developed, 2) information gathering, 3) decision evaluation, the narrowing down of colleges to a particular set of choices, and 4) decision execution, the choice of one postsecondary educational institution over another. Young and Reyes (1987) suggested that such nonmonetary costs and risks as parental and peer expectations were more influential in the need arousal and

information gathering stages than were monetary costs.

Sociological models are derivatives of status attainment reseearch and have focused on the identification and interrelationship of factors which influence aspirations for college attendance. The status attainment process is concerned with the role played by various factors in the allocation of individual positions or occupations of varying degrees of prestige or status (see for example Sewell & Shah, 1967; Sewell, Haller & Portes, 1969; Sewell & Hauser, 1975). Using status attainment models, family socioeconomic background and student academic ability were predicted to have a joint positive effect on aspirations for college. Parental encouragement (Sewell & Shah, 1968), the influence of significant others and high school academic performance (Sewell, Haller, & Portes, 1969; Sewell & Hauser, 1975) were factors subsequently added as refinements to the basic model. Significant others were the students' parents, teachers, and peers.

Econometric and sociological models treat college choice as if it was a single decision. These models do not lend themselves to an examination of the developmental aspects of college choice. In contrast, most of the combined models of college choice are stage-based models. Typically, combined models draw upon elements of two or more types of models; sociological and enconometric models have exerted the strongest influence upon combined models. In most instances, combined models identify three or more stages of the student college choice process

(Chapman, 1981; Chapman, 1984; Gilmour, 1975; Hossler & Gallagher, 1987; Jackson, 1982; Litten, 1982). While econometric and sociological models have helped to explain the factors which influence college choice they do not lend themselves to policy oriented interventions. The advantage of combined college choice models is that they enable researchers and policy makers to focus on a specific stage of the college choice process. Several of these models suggest that the college choice process is a three stage process. This study drew upon the three stage model of Hossler and Gallagher (1987) which outlines the following stages:

1. Predisposition - the students' aspirations to continue their formal education after high school,
2. Search - the process of considering to which types of postsecondary educational institutions to apply, and
3. Choice - the selection of an institution to attend.

There are few causal studies using large samples of high school students which focus on predisposition and attempt to understand the interaction of family and student background characteristics, student achievement, and student motivation upon their predisposition toward postsecondary education (for one example see Hossler & Stage, 1988). Jackson (1986), Manski and Wise (1983), and Tierney (1980) for example, used large samples to conduct causal studies of student college choice, however, two of these used data sets are more than a decade old and none of them look specifically at the predisposition phase of college choice.

Predisposition

The predisposition stage of student college choice refers to the earliest stage of the process when students make the decision as to whether they aspire to continue their formal education after high school. A review of existing research on the correlates of postsecondary enrollments indicates that the following factors may be related to a predisposition toward postsecondary education.

1. Family income was positively associated with plans to attend a postsecondary educational institution (Bishop, 1977; Carpenter & Fleishman, 1987; Hause, 1969; Jackson, 1986; Manski & Wise, 1983).
2. Parental levels of education were positively associated with postsecondary educational plans (Carpenter & Fleishman, 1987; Gilmour, 1975; Jackson, 1986; Trent & Medsker 1967).
3. Student academic achievement/ability was positively associated with plans to attend a postsecondary educational institution (Bishop, 1977; Carpenter & Fleishman, 1987; Hause, 1969; Jackson, 1986; Manski & Wise, 1983).
4. Gender was unrelated to postsecondary plans, however, research suggested that family and environmental factors differentially affected the aspirations of males and females (Carpenter & Fleishman, 1987; Marini &

Greenberger, 1978).

5. Evidence on the impact of race and ethnicity upon postsecondary educational plans was contradictory. Ekstrom (1985) and Tuttle (1981) concluded that when SES and ability were held constant the race had no effect upon postsecondary aspirations. Brown (1982), however, compared data from 1972 NLS data with 1980 HSB data and concluded that more black students were aspiring to continue their education, but were unable to do so.
6. Parental encouragement was positively associated with postsecondary educational plans (Conklin & Dailey, 1981; Ekstrom, 1985; Gilmour, 1975; Murphy, 1981).

Each of these factors appear to be related to a predisposition toward postsecondary education. The focus of this investigation, however, was upon the relationship between family background characteristics, parental encouragement and student educational plans. Although previous investigations have established relationships between background characteristics, parental encouragement, and students' educational aspirations, causal relationships among these variables have not been studied.

Additionally, many studies concluded that studdents' decisions concerning whether or not to attend college were made before the junior or senior year of high school (Gilmour, 1975; Russell, 1980; Hossler & Stage (1988). Ekstrom (1985) found that 61% had made the decision by the ninth grade.

The focus of this investigation was on causal influences on

the early decision of whether or not to attend college. Given the current level of debate on thee importance of family savings as a means for paying the costs of higher education, parental savings level was also included as an index of parental encouragement.

The purpose of this study was to examine the effects of family background characteristics (family income, parent's marital status, parents education, an number of children already enrolled in postsecondary education) upon parents' postsecondary educational plans for their children, parents' saving for their children, and the amount of planning parents do with their children. Finally the influence of these factors on students' educational plans were examined. Analysis was conducted using separate male and female subgroups to explore possible differences by gender.

Drawing upon the model of the predisposition phase of student college choice (Hossler & Gallagher, 1987) and the factors associated with predisposition, the causal model in Figure 1 was tested.

Figure 1 about here

Method

Sample

The sample for this study was drawn from all students attending 21 high schools within the state of Iniana.

Participating high schools were selected using a cluster design to assure that the sample represented adequate numbers of ethnic minorities, students at all levels of socioeconomic status, and rural as well as metropolitan high schools. The study was sponsored and the data collected by the Indiana College Placement and Assessment Center, the research and development arm of an effort by the state of Indiana to increase postsecondary participation rates.

In January, 1987, families of ninth grade students in the targeted high schools were mailed a packet which contained two survey instruments, one for parents and one for students. A second mailing, a month later, contained an additional survey each for students and parents. The four questionnaires sought information in the following categories: demographic, family background, high school experiences, and student and parental aspirations. Seventy-eight percent of the sample (3,834) responded to at least one of the two mailings.

A generalizability study compared those who responded to the written surveys with a group of families who had responded only when reached by telephone. A comparison of demographic characteristics showed that the two groups were virtually the same. Black students (the number of non-Black minority students in Indiana is small) were slightly more likely to have returned the survey, but the total proportion of Black students in the sample (7%) was less than the proportion in the population (10%).

Measurement of Variables

Measurement of variables used in this study was as follows: Background characteristics: mother's education (completion of - 1, grade school; 2, 8th grade; 3, some high school; 4, high school diploma; 5, some college; 6, graduated from college; 7, post-graduate degree), father's education (same as mother's), number of children in college (1, zero; 2, one; 3, two; 4, more than two), family income (1, 10,000; 2, 10,000-14,999; 3, 15,000 -19,999; 4, 20,000-24,999; 5, 25,000-29,999; 6, 30,000-34,999; 7, 35,000-39,999; 8, 40,000-44,999; 9, 45,000-49,999, 10, 50,000+), and parents' marital status (0, single, widowed, or divorced; 1, married).

Parental encouragement factors: parents' expectations for student (1, high school diploma or uncertain; 2, vocational-technical certificate; 3, 2-year college degree; 4, 4-college degree; 5, masters degree; 6, professional degree), parents' savings for college (1, cannot save money; 2, have not begun to save; 3, have been saving for 1-2 years; 4, saving for 3-5 years; 5, saving for >5 years), and discuss college with parents (talk most about post high school plans with - 1, parents; 0, friends, teachers, guidance counselors or others).

Students' predisposition: students' aspirations (1, high school diploma or uncertain; 2, vocational technical certificate; 3, 2-year college degree; 4, 4-year college degree; 5. masters degree; 6, professional degree).

Analysis

To identify significant effects within the model a causal analysis technique, LISREL, was used. The data were analysed using a subset of those who had responded to the surveys and included all students for whom no variable of interest was missing (1421). This was 29% of those who were originally sampled.

A comparison of this subsample with the original data set revealed few differences. Parents' education levels for the groups were virtually the same. For fathers 24% in both groups had completed at least a bachelor's degree. For mothers 17% of the original group and 18% of the sample had completed a bachelor's degree. Seventy-one percent of the larger sample and 71% of the subsample had parents who were married. Both groups measured 1.23 for number of children enrolled in postsecondary education. Minorities were slightly underrepresented in the subsample, 10% compared with 12% (although they were overrepresented in the total study).

Finally, aspirations for parents and students in both groups were similar. Sixty-eight percent of parents in the total sample and 69% in the subsample expected their children to earn at least a bachelor's degree. Sixty-three percent of students in thee total sample and 64% in the subsample expected to earn at least a bachelor's degree.

RESULTS

Results of the analysis are presented in Tables 1 & 2. Standardized path coefficients (beta weights) along with significances are indicated.

Tables 1 & 2 about here

Influences of Parents' Expectation

For both females and males in this sample, the same three family background characteristics; father's education, mother's education, and family income, had significant positive relationships with parents' educational level expectation for the student. Father's education was the strongest influence for both subgroups ($p<.001$). For the female subgroup the effect of family income was nearly as strong.

Influences on Parents' Savings for College

For the male subgroup all five of the background factors influenced parents' savings for college. For the female subgroup, only three of the five factors were significant. As expected, number of children in college was negatively related and family income was positively related to parents' savings for both groups. The negative effect of other children in college was stronger for females, however. Both father's education and parents' marital status (positive for married) were significantly

related to pare.. ' savings for males but not for females.

Influences on Discussions about College

For males father's education ($p<.05$) and marital status ($p<.001$) were positively related to whether or not the student was likely to talk with the parent about college. For females the only significant influence on whether the student was likely to talk with parents was number of children enrolled in college; that influence was negative.

Influences on Students' Aspirations

Parents' expectation ($p<.001$) was the strongest positive influence on students' aspiration for both males and females. For both subgroups father's education was also a significant predictor. Additionally, for females whether or not parents were likely to discuss college with the student ($p<.001$) and whether or not parents were married ($p<.05$) also influenced students' aspirations.

Final Empirical Models

Final empirical models reduced to present only the paths which were significant for this analysis are presented in Figures 2 & 3. Explained variance for the final criterion, student's educational level plans was 36.8% for females and 30.8% for males.

Figures 2 & 3 about here

DISCUSSION

Previous research indicated that parents' education and parental expectations exerted strong influences on the postsecondary plans of high school students (Conklin and Dailey, 1981; Gilmour, 1975; Litten, et al., 1983; Murphy, 1981). Earlier research has also reported that level of mother's education exerted the greatest amount of influence on the postsecondary participation rates of their children (Bowen, 1977). The results of this study, however, suggested that parents' influences on students' aspirations were both complex and varied.

The level of father's education exerted the strongest indirect and direct effects upon the postsecondary plans of students. However, the effects of the level of father's and mother's education varied for male and female ninth grade students. For female students, the level of father's education had little effect on parent's savings for college, whereas for males it had a significant positive effect. The level of father's education had a significant positive effect on the frequency with which parents discussed college with male students, but it did not significantly effect the frequency with

which parents discussed college ith female students. These results suggest parents may be less committed to postsecondary education for their daughters than for their sons.

Interestingly, neither discussion with parents about postsecondary education or parental level of saving had significant direct effects upon the postsecondary educational aspirations of male students. The frequency with which female students discussed college with their parents, however, did have a negative effect on their educational plans.

Hodgkinson (1983) has expressed concerns about the impact increasing numbers of single parent families might have upon future college students. These findings indicated that being married had a small indirect effect on savings and discussions of college for males, and a small positive direct effect upon the postsecondary plans of female ninth grade students. The effect sizes for both males and females, however, were relatively small.

There were limitations to this study. Students who participated in this study came from a targeted group of high schools in the state of Indiana. Data was obtained from those whose families completed four surveys regarding college plans. The response rate for this study was high, however, it is possible that families who were uninterested in college neither filled out surveys nor responded to the telephone survey which was used to establish generalizability. This was not a random sample of students from around the state or the United States.

Nevertheless, these findings enriched our understanding of

the factors influencing the postsecondary plans of high school students. They suggest that there could be subtle differences at work within the family which differentially affect male and female students. Since the emphasis upon savings for college is relatively new, we must be careful not to read too much into these results. However, the analysis presented here raises questions about the effects that parental savings may have on student college choice.

Future studies should more closely examine the effects of family characteristics, parental aspirations, and parental savings upon educational aspirations. How do parental characteristics and aspirations influence student education plans? How are such expectations communicated to children? Are there differences in family and high school experiences upon minority and majority studets' aspirations? These questions merit further examination. Qualitative research techniques might be useful in providing additional insights into some of these questions.

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Figure 1. Family Influences on Male and Female Students' Predisposition to College.

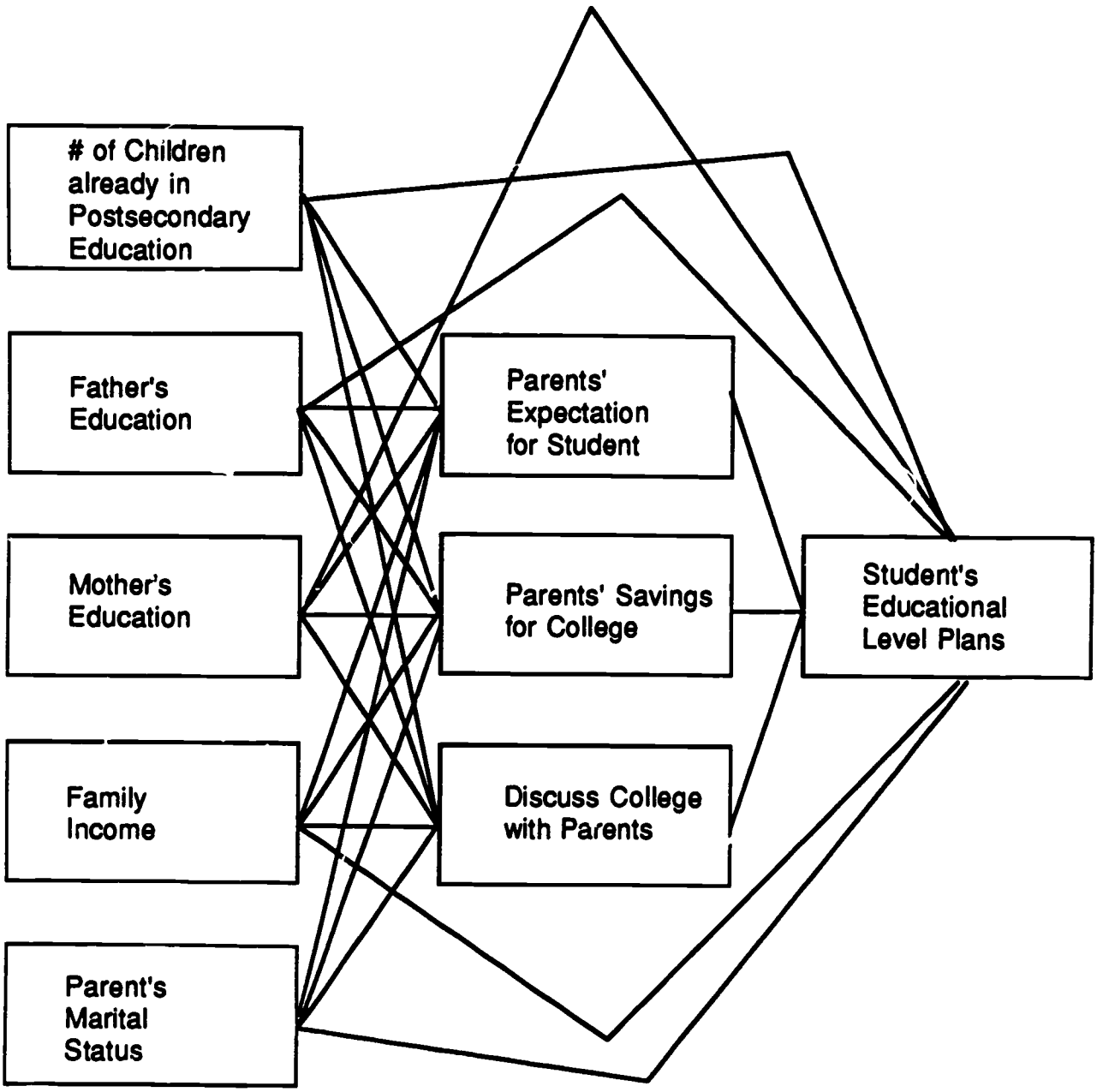

Table 1

Standardized Path Coefficients - Female Subgroup (n=718)

Independent Variable	Dependent Variable: Parents' Expectation	Parents' Savings	Parents' Talking	Students' Aspiration
Children in college	.039	-.130***	-.079*	.008
Fathers' Education	.154***	.063	.070	.070*
Mothers' Education	.080*	.090*	-.044	.028
Family Income	.142***	.337***	-.032	.036
Parents' Marital	-.040	.042	.039	.052*
Parents' Expectation	0	0	0	.526***
Parents' Savings	0	0	0	.041
Parents' Talking	0	0	0	.109***

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

Table 2

Standardized Path Coefficients - Male Subgroup (n=703)

Independent Variable	Dependent Variable: Parents' Expectation	Parents' Savings	Parents' Talking	Students' Aspiration
Children in college	-.001	-.056*	-.034	.024
Fathers' Education	.183***	.160***	.091*	.076*
Mothers' Education	.108**	.133***	.023	.020
Family Income	.080*	.252***	-.021	-.018
Parents' Marital	.046	.085**	.143***	-.001
Parents' Expectation	0	0	0	.528***
Parents' Savings	0	0		-.007
Parents' Talking	0	0	0	.006

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

Figure 2. Reduced Path Model for the Female Subgroup

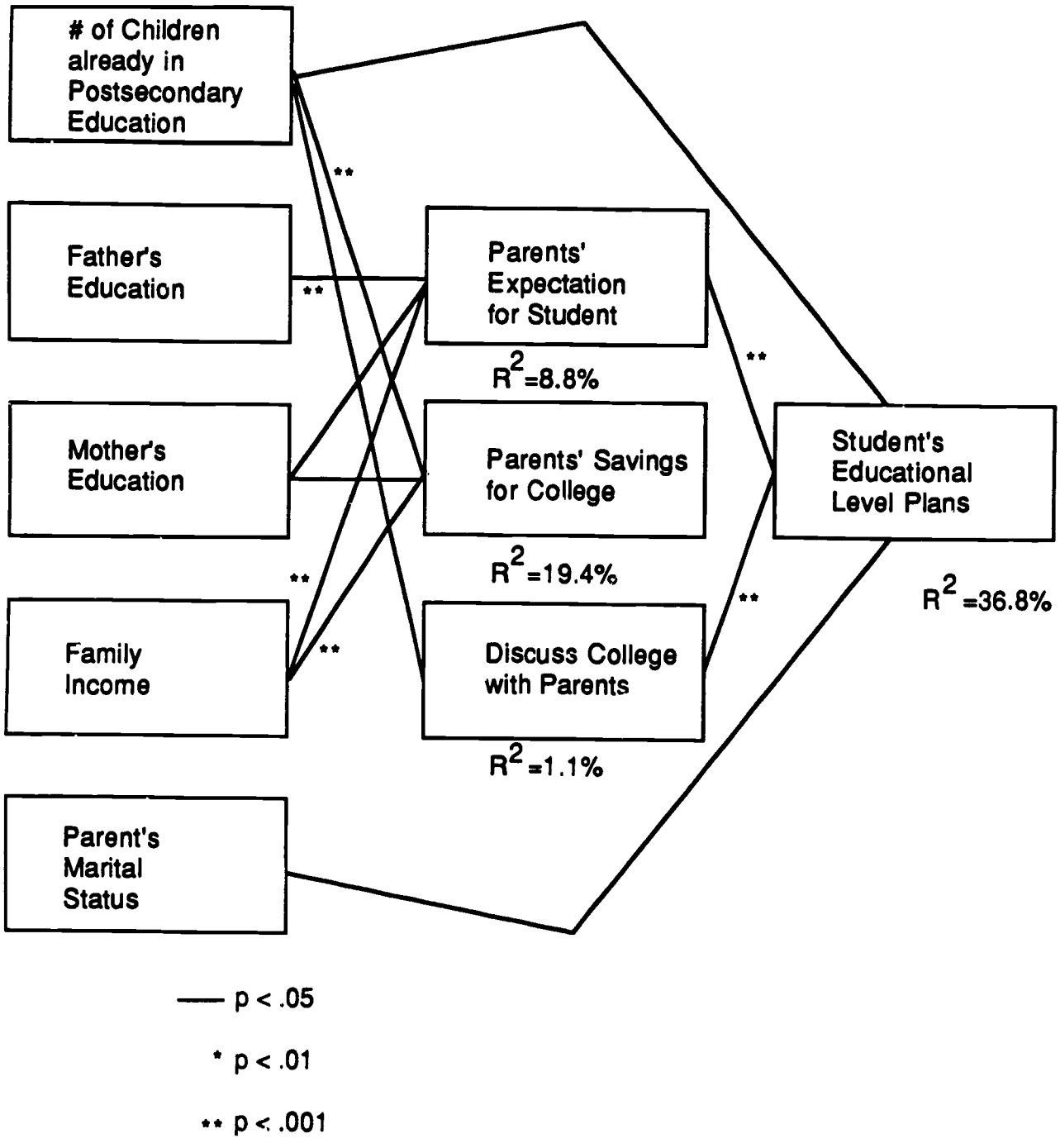

Figure 3. Reduced Path Model for the Male Subgroup.