

**PREFERRED WORK INTENSITY OF SECONDARY SCHOOL STUDENTS:  
NEW FINDINGS AND INSIGHTS ON WHY PART-TIME WORK INTENSITY  
CORRELATES WITH DRUG USE AND PROBLEM BEHAVIOR**

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## **ABSTRACT**

This occasional paper examines interrelations among students' educational engagement, desired and actual school-year employment, substance use, and other problem behaviors. Cross-sectional findings from representative samples of 8th, 10th, and 12th grade students in the United States, totaling over 300,000 respondents surveyed during the years 1992-1998, include the following: Large majorities of adolescents wish to work part-time during the school year, although most in earlier grades are not actually employed. Those who desire to work long hours tend to have low grades and low college aspirations; they are also more likely than average to use cigarettes, alcohol, and marijuana. Students' *preferences* for part-time work emerge at younger ages (i.e., earlier grades) than *actual* work, and the preferences show equal or stronger correlations with educational disengagement and problem behaviors.

A somewhat shorter version of this paper, entitled "Wishing to Work: New Perspectives on How Adolescents' Part-Time Work Intensity Is Linked to Educational Disengagement, Substance Use, and Other Problem Behaviors," has been accepted for publication in the *International Journal of Behavioral Development*.

## INTRODUCTION

Most high school seniors work part-time during the school year. For the great majority of such students this work is not required by their school program, nor is it undertaken primarily in order to help with family finances (Bachman, 1983). Rather, it appears that employment during the school year is an option—albeit an option that most high school seniors and many younger students choose. In this article we focus particular attention on the part-time employment *preferences* of secondary school students in the United States during the 1990s. For those who study adolescent development, such preferences are likely to be inherently interesting. But part-time work preferences also may provide a new perspective on why those students who work long hours tend also to be involved in drug use and other problem behaviors.

It is now well established that, during at least the last quarter of the twentieth century, the amount of part-time work by high school students, or *work intensity*, has been positively correlated with problem behaviors, including substance use (Bachman, Bare, & Frankie, 1986; Bachman, Johnston, & O'Malley, 1981; Bachman & Schulenberg, 1991, 1993; Brooke & Newcomb, 1995; Frone & Barnes, 1995; Gottfredson, 1985; Greenberger & Steinberg 1986; Mortimer, Finch, Ryu, Shanahan, & Call 1996; Mortimer & Johnson, 1997; Ploeger, 1997; Roman & Johnson, 1996; Steinberg & Dornbusch, 1991), sexual involvement (Ku et al. 1993; Newcomb & Bentler 1988), earlier and more frequent dating (Bachman & Schulenberg, 1993; Mihalic & Elliott 1997), inadequate sleep and exercise (Bachman & Schulenberg, 1993), and delinquent behavior (Bachman & Schulenberg, 1993; Steinberg & Dornbusch, 1991; Tanner & Krahn, 1991). However, there is also fairly widespread agreement that the appropriate causal interpretation of these correlations is neither simple nor unidirectional (e.g., Bachman & Schulenberg, 1993; Frone & Barnes, 1995; Greenberger & Steinberg, 1986; Mihalic & Elliott, 1997; Mortimer & Finch, 1986; Steinberg & Dornbusch, 1991). The complexity of causal interpretation arises because differences in student work intensity do not arise randomly, as in an experimental design; rather, the differences reflect largely the choices of the students themselves (and, in many instances, their parents). Because of this “non-random assignment” of variations in work intensity, the correlations with problem behaviors could reflect any or all of at least three causal processes: (a) work intensity is a cause of problem behaviors, (b) work intensity is a result of problem behaviors, (c) both are results of other more fundamental or causally prior factors (such as poor educational success and adjustment).

Our previous examination of the evidence led us to favor the third causal interpretation as the primary, though not exclusive, basis for the observed correlations. Based on much of the early literature (e.g., Baumrind & Moselle, 1985; Donovan & Jessor, 1985; Newcomb & Bentler, 1988), as well as our own multivariate analyses nearly a decade ago of the correlates of work intensity using large nationally representative samples of 12th grade students from the high school classes of 1985-1989, we concluded that “...work intensity can be closely linked to a more general syndrome of precocious development, much of which predates extensive part-time employment during the school year” (Bachman & Schulenberg, 1993, p. 233). Stated differently, those students initially most disposed toward drug use and other kinds of trouble are also (a) most likely to *want* jobs involving long hours and thus (b) more likely actually to *obtain* such jobs.

More recently, additional evidence has been offered concerning how work intensity may be linked with educational and other outcomes. A number of longitudinal studies indicate that prior educational performance and/or attachment has a negative relationship with subsequent work intensity (e.g., Entwisle, Alexander, & Olson, 2000; Mihalic & Elliott, 1997; Mortimer & Johnson, 1997). In particular, Schoenhals, Tienda, & Schneider (1998) examined panel data from the National Education Longitudinal Study (NELS 88) and concluded that the linkage between work intensity and academic outcomes was attributable to preexisting differences; specifically, youth who had poorer educational performance in 8th grade showed higher levels of work intensity at 10th grade, on average. We strongly suspect that if the work intensity *preferences* of those 8th grade students had been measured, those with poorer educational performance would have preferred longer hours of work, on average.

Why should most secondary school students want to work in part-time jobs, and why should some of them be willing to work long hours in such jobs? Most jobs available to adolescents in North America are in the low-level service sectors (Aronson, Mortimer, Zierman, & Hacker, 1996; Krahn, 1991) and are neither very exciting nor educationally valuable; for most young people, therefore, the explanation for choosing long hours must lie elsewhere. Most economists would tell us that the answer is obvious: "It's the money, stupid!" No doubt most students who work long hours would say essentially the same thing. In a society heavily geared toward luxury good consumption (e.g., Frank, 1999; Schor, 1992), many high school students seem to have accepted the notion that their value is measured, in part, in terms of what they can spend and what they have bought. Indeed, findings first reported nearly two decades ago (Bachman, 1983), and replicated in each new cohort (recent data summarized in Appendix C), show that about three-quarters of high school seniors report that they use their earnings primarily for discretionary spending (clothing, music, movies, eating out, other recreation, personal expenses). In terms of other expenditures, between a quarter and a third of adolescents report saving some of their earnings for college (Bachman, 1983; Shanahan, Elder, Burchinal, & Conger, 1996). About a third to a half of adolescents report saving for other investments (Bachman, 1983; Shanahan et al., 1996), while close to two-thirds in a rural sample do so (Conger & Elder, 1994; Elder & Conger, 2000; Shanahan et al., 1996). Furthermore, for adolescents from lower income families, working may reflect a desire to improve economic conditions (Leventhal et al., 2001). However, the *percentage* of adolescents' total income spent on nondiscretionary items is modest. For instance, studies over the years have shown that only one out of five high school seniors reported contributing more than "a little (1-20%)" of their earnings to "helping pay family living expenses (groceries, housing, etc.)," and fully half reported that none of their earnings went for such purposes (Bachman 1983). Overall, the majority of adolescents report that little or none of their earnings are allocated for payment of family living expenses or savings for future education or other long-range purposes. On balance, it seems that for many young people, consumption is fun in its own right; moreover, conspicuous consumption is one way for some adolescents to demonstrate their value to peers, to adults, and to themselves.

Granted that having and spending money is gratifying to most teenagers, and granted also that there are plenty of jobs available to most of them in the present economy, perhaps we really should be asking: why is it that many students choose *not* to work long hours in part-time jobs? Again the answer seems obvious; time spent in part-time work is time not available for studies,

or for extracurricular activities, or even for getting adequate sleep. Many students, perhaps encouraged by their parents, are willing to delay the gratification associated with large-scale discretionary spending in order to have adequate time to pursue their studies and other developmentally valuable activities. This may be particularly true for those adolescents whose primary orientation is with the student role (Warren, 2002) and who are therefore committed to school-related activities. However, others who consistently struggle with school or who are detached from the student role may begin to look elsewhere for their identity. Thus, even before they can legally work, these adolescents may eagerly anticipate the opportunity to try on the worker role, more so than those who identify successfully with the student role.

In sum, students differ in the amounts of work that they choose, and we believe that those choices are heavily influenced by factors such as commitment to (and success in) school, and perhaps also by a more general willingness to delay consumption. Although some students may be restricted by the job market or by parents from working as much as they choose, we suspect that relatively few students work *more* than they would prefer—and in those instances we suspect that the students work the longer hours primarily in order to have more earnings.

### **Work Preferences and the Premature Adulthood Syndrome**

As noted in the previous section, we view long hours of employment while in high school as part of what we have described earlier as “. . . a syndrome of behaviors that are interrelated and at least to some extent mutually reinforcing” (Bachman & Schulenberg, 1993, p. 232). Our earlier paper did not put a specific label on that syndrome, other than to cite a number of related concepts in the literature. Most notably, Newcomb and Bentler (1988) propose the term “precocious development” to refer to adolescents who are prematurely engaged in adult-like roles, Baumrind and Moselle’s (1985) “hiatus in development” implies a gap in adolescent development in which vital psychological tasks are delayed due to premature adoption of adult-like roles, Jessor and Jessor’s (1977) “pseudomaturity” suggests one underlying construct that accounts for various problem behaviors, and Greenberger and Steinberg’s (1986) “pseudoadulthood” suggests that adolescents take time away from a psychological “moratorium” to engage in work and other adult-like roles. Similarly, Jessor and Jessor’s (1977) “pseudomaturity” suggests one underlying construct that accounts for various problem behaviors, while others propose a constellation of personality traits that predict high risk behaviors (Arnett, 1990; Caspi et al., 1997).

Galambos and Leadbeater (2000), in their review of trends in adolescent research, pointed to an increasing research focus on the co-occurrence of problem behaviors in young people (see also Galambos & Tilton-Weaver, 2000). There has been a great deal of evidence for the interrelationships between various problem behaviors and early entry into adult-like roles as proposed in the above models. Studies indicate that deviant behavior in one realm (e.g., drug use) leads to premature exit from adolescent roles (Hagan & Wheaton 1993) and early entry into adult-like roles such as sexual activity, marriage, and parenthood (Chassin, Presson, Sherman, & Edwards, 1992; Newcomb & Bentler 1988; Schulenberg, Bachman, O’Malley, & Johnston, 1994), and these precocious transitions can lead to further problem behaviors (Krohn, Lizotte, & Perez, 1997; Newcomb & Bentler, 1988; Thornberry, 1997). Entering adult roles prematurely is associated with unsuccessful developmental transitions and has negative implications for later

well-being in adulthood (Newcomb & Bentler, 1988; Sampson & Laub, 1993; Krohn et al., 1997). There is some recent empirical support for the notion that when adolescents feel older relative to their same-age peers, they are more likely to engage in problem behaviors, including substance use (Galambos, Kolaric, Sears, & Maggs, 1999; Stattin & Magnusson, 1990). However, Newcomb (1996) proposes that some aspects of premature adulthood are positive in nature, such as early financial responsibility, and when occurring in isolation from other early transitions, they can have positive long-term implications including higher SES and educational outcomes (see also Carr, Wright, & Brody, 1996; Mortimer & Johnson, 1997; Ruhm, 1995).

The terms used in the literature clearly differ in their overtones, with “precocious” appearing much more positive than “pseudo.” Our own preference now is for a new term, “Premature Adulthood (P-A) Syndrome,” which indicates that young people are seeking some of the pleasures and status of adulthood, but are doing so prematurely. The P-A Syndrome refers to an adolescent engaging in behavioral freedoms associated with adulthood (e.g., consumerism, smoking, drinking) without possessing the corresponding psychological maturity associated with adulthood. For instance, although an adolescent may have significant purchasing power (as a result of working long hours), he or she may not have the adult maturity or foresight to save such money for long-term goals. The P-A Syndrome may be more likely when an adolescent’s subjective age is older than actual chronological age. There is some recent empirical support for the notion that when adolescents feel older relative to their same-age peers, they are more likely to engage in problem behaviors, including substance use (Galambos, Kolaric, Sears, & Maggs, 1999; Stattin & Magnusson, 1990).

We propose that the *desire* to work long hours should be viewed as part of the P-A Syndrome—a component that often emerges earlier than the actual work. Indeed, the actual experience of working long hours may make relatively little unique contribution to problem behaviors, above and beyond that already associated with the syndrome. Moreover, preferred work intensity might serve as a developmentally prior proxy for the P-A Syndrome, or at least that portion of the syndrome that eventually comes to be associated with actual work intensity among students. Thus, examining *preferred* work intensity and *actual* work intensity may provide additional leverage in efforts to sort out how long hours of work may be causally connected with substance use and other problem behaviors during adolescence. In particular, we can examine how closely the dimensions of preferred and actual work hours match, and whether some students—especially younger students—prefer longer hours than they actually are able to work. Most important, we can examine whether actual or preferred hours of work is the stronger predictor of problem behaviors and whether in multivariate analyses one dimension can largely or entirely “account for” the other. (In addition to asking about respondents’ own work preferences, we asked them to estimate how much their parents would want them to work. The degree of consistency or discrepancy between these two preference measures might provide one kind of indicator of a student’s desire to conform to, or depart from, perceived parents’ wishes or “best judgments.”)

This line of thinking led us, in 1992, to develop a new measure of work *preferences* for inclusion in our ongoing annual nationwide surveys of 12th grade students, and also in a newly begun series of annual nationwide surveys of 8th grade and 10th grade students. We reasoned that if we could ascertain students’ preferences about whether to have long (or short, or zero)

hours of part-time work during the school year, then we could test whether problem behaviors are correlated with preferred hours of work, as well as with actual hours of work.

## **Overview of Present Study and Hypotheses**

In this article, we examine data from national samples of 8th, 10th, and 12th grade students concerning how many hours per week of paid work they would *prefer* during the school year, assuming they could work just the number of hours they wanted. We report how these preferences relate to number of hours *actually* worked, and we show how both measures are related to drug use and other problem behaviors. Additionally, we include actual hours and preferred hours, along with measures of background and prior educational success, in multivariate analyses predicting drug use and other problem behaviors. Finally, we look separately at only those individuals who are not working for pay during the school year, and we ask whether and how their preferences for hours of work relate to drug use and other problem behaviors. In all of these analyses, we examine gender and grade-level variations.

Although we view this research as exploratory in some respects, we began our work with a number of hypotheses based on the above conceptualizations. The six hypotheses, along with a brief rationale for each, are as follows:

*Hypothesis 1.* In general, we expected adolescents' preferred hours of work to be higher than actual hours of work. A variety of constraints, including school requirements, parental rules, and limitations in the job market (in at least some communities) all operate primarily to restrict the working hours of some adolescents who would prefer more work time. We expected the discrepancies between actual and preferred hours to be greater among younger students (those in 8th and 10th grades) compared with high school seniors, because such constraints are likely to be stricter for younger students and also because of age-related legal limits on part-time work.

*Hypothesis 2.* We expected actual hours of part-time work to be correlated substantially with preferred hours. We think relatively few students work when they would rather not and that relatively few work much more than they prefer; accordingly, work preferences should be a major factor influencing actual work hours. However, the correspondence between preferences and actual work was expected to be far from perfect, especially for younger students, given the sorts of constraints discussed above.

*Hypothesis 3.* We expected preferred work hours to correlate negatively with indicators of educational commitment and success (grades, college plans, college preparatory curriculum, and parents' educational attainment). This hypothesis derives directly from the view that preferred work intensity is part of a P-A Syndrome that includes a reduced commitment to education.

*Hypothesis 4.* We expected that multivariate analyses involving both preferred and actual work hours would reveal some marginal contribution from work preferences above and beyond the contribution from actual hours. If preferences influence actual hours of work, and if longer hours contribute to problem behaviors, then some correlation *could* arise entirely due to indirect causation. However, if only indirect causation were involved, then the correlations involving preferred work hours would be weaker than those involving actual work hours, and multivariate

analyses would show no unique contribution from preferences. That is not what we expected, because we view preferences for work as an earlier emerging phenomenon than actual hours of work.

*Hypothesis 5.* We expected the correlations between preferred hours and problem behaviors to be at least roughly equal to those between actual hours and problem behaviors; that is, we did not expect the data to suggest that the relationships with preferred work could be explained entirely as an indirect result of the fact that preferences are related to actual work. As discussed above, we view preferences for work as part of a P-A Syndrome, and we think it may be an earlier emerging symptom of the syndrome than actual hours of work. Accordingly, we expected that multivariate analyses involving both preferred and actual work hours would reveal some marginal contribution from preferences above and beyond the contribution from actual hours.

*Hypothesis 6.* For those students not working in a paid job, we expected that preferred hours of work would correlate positively with drug use and other problem behaviors. Such a finding, unconfounded with differences in actual hours worked, would be consistent with viewing the desire to work long hours as part of the P-A Syndrome described above.

## **METHOD**

The present investigation expands upon our earlier work (Bachman & Schulenberg, 1993) and makes use of methods which are similar in many respects to those used earlier. The data were drawn from the Monitoring the Future project, an ongoing study of high school students conducted by the Institute for Social Research at the University of Michigan. The study has been described extensively elsewhere (Bachman, Johnston, & O'Malley, 1996; Johnston, O'Malley, & Bachman, 1999). Briefly, the study includes large nationally representative surveys of each 12th grade class beginning in 1975 and of each 8th grade and 10th grade class beginning in 1991. Data from all three grades for the years 1992-1998 are included in this report.

### **Samples and Procedures**

A three-stage probability sample (Kish, 1965) is used each year to select approximately 135 public and private high schools representative of the 48 coterminous states. Questionnaires are administered to 8th, 10th, and 12th graders during school hours each spring, usually in a regularly scheduled class period. Special procedures are used to ensure confidentiality; these procedures are explained carefully in the questionnaire instructions and reiterated by the interviewers. Student response rates were 88 percent to 91 percent for 8th graders, 86 percent to 88 percent for 10th graders, and 82 percent to 84 percent for high school seniors for each of the survey years included in this report (1992-1998) (Johnston et al., 1999).

Six different questionnaire forms were used each year for the high school seniors (four forms for the 8th and 10th graders), each administered to a random one-sixth (or one-fourth) of the sample. Items used in the present analyses appear on all forms for 8th and 10th graders. For high school seniors, key items including work intensity as well as demographic measures and self-reports of drug use appear on all forms. Some other items of interest (including preferred

work intensity and some outcome measures) appear on only one or two forms. Accordingly, many analyses involving such items were based on only about one-sixth or one-third of the total sample.

Because of gender and grade level differences in many drug use measures, actual and preferred work intensity, and other key measures such as grade point averages (GPAs), all analyses were conducted separately for male and female students and separately for 8th, 10th, and 12th graders (see also Mortimer, Finch, Shanahan, & Ryu, 1992a, 1992b; Mortimer, Finch, Owens, & Shanahan, 1990; Steinberg, Greenberger, Garduque, Ruggiero, & Vaux, 1982; Yamoor & Mortimer, 1990). The numbers of cases providing employment data for 8th graders were 59,866 males and 63,092 females; for 10th graders were 52,679 males and 54,792 females; and for 12th graders were 48,481 males and 53,317 females. Numbers of cases for specific analyses were somewhat smaller because of missing data on other variables. All calculations of statistical significance reported herein incorporated adjustments for design effects in complex clustered samples (Kish, 1965), following procedures specified in Bachman, Johnston, and O'Malley (2000, Appendix B).

## **Measures**

The predictors in the present analyses consisted of background characteristics, indexes of educational commitment and success, work status and intensity, as well as preferred and parental preferred work hours. The outcome variables consisted of indexes of substance use, other problem behaviors, and sleep habits.

*Predictors.* Background characteristics included cohort, region, urbanicity, parent education, and race. Seven separate cohorts of 8th, 10th, and 12th graders were included, ranging from 1992 to 1998. Region consisted of four categories including the South, Northeast, North Central, and West. Urbanicity consisted of five categories, ranging from farm to large urban area. Parent education was based on the average of mother's and father's educational level, and possible responses ranged from at least one parent not graduating from high school (coded as 1) to at least one parent attending graduate or professional school after college (coded as 5). Four race categories were distinguished: White (ranged from 60% to 72% depending on grade level); Black (12%-15%); Hispanic, including Chicano, Cuban American, Puerto Rican American, and Other Latin for 8th and 10th graders (10%-12%) and Chicano and Latin American for 12th graders (7%); and "Other," including American Indian, Asian American, and other (8%-13%).

Three indexes of educational success and commitment were used, including high school GPA, 4-year college plans, and high school curriculum. High school GPA was based on a single item concerning typical grades over the high school years, and possible responses ranged from C- or lower (coded as 1) to A (coded as 5). College plans were measured with a single item, and possible responses ranged from "definitely won't graduate from a 4-year college" (coded as 1) to "definitely will graduate from a 4-year college" (coded as 4). High school curriculum was measured with a single item, and responses were grouped into three categories: vocational-technical, general, and college preparatory.

Please see Table 1 (notes b-d) for a description of all work intensity, preferred work intensity, and parental preferred work intensity questions. Response categories included none, 5

hours or less, 6-10, 11-15, 16-20, 21-25, 26-30, and more than 30 hours. As is evident, between a quarter and one-half of 8th and 10th graders hold a part-time job, and close to three-quarters of 12th graders do so. Furthermore, a substantial number of adolescents work long hours, particularly in the older grades. Specifically, between 5 percent and 10 percent of 10th graders work more than 20 hours a week, and about 30 percent of high school seniors do so.

Analysis of earlier Monitoring the Future samples of high school seniors (Bachman & Schulenberg, 1993) found that since some jobs were unpaid, potentially important distinctions may be blurred. Accordingly, any respondent who reported working but indicated zero earnings was placed in a separate category, *working but not for pay*. Note that about 2 percent of 8th and 10th graders and 7-8 percent of 12th graders fall into this category. Since the present investigation is primarily interested in *paid* work experience, however, we exclude those in the category of “working, not for pay” from all subsequent analyses.

*Outcome variables.* Means and standard deviations of outcome variables are summarized in Table 2 by grade level and gender. The indexes of current substance use included cigarette use, alcohol use (more than a few sips), heavy drinking (5+ drinks in a row), and marijuana or hashish use. Other outcome behaviors included interpersonal aggression, victimization, theft, and sleep hours. See Appendix B for question wordings, scales, and alphas. The Monitoring the Future substance use indexes have been found to possess good psychometric properties (in-depth considerations of reliability and validity of the indexes are provided in O’Malley, Bachman, & Johnston, 1983, and Johnston & O’Malley, 1985).

Three indexes of other problem behaviors over the past year included interpersonal aggression (measured with a 3-item scale), general victimization (measured with a 4-item scale), and theft (measured with a 2-item scale). Each of these indexes was based on items that were included in all forms for 8th and 10th graders. For 12th graders, however, aggression and theft items were included on two (out of six) forms, and victimization was included on one form. As a result, the corresponding analyses were based on approximately one-sixth or two-sixths of the 12th grade sample.

Also included is a variable concerning the extent to which the individual gets at least 7 hours of sleep per night. This item was included in all forms for 8th and 10th graders, but only one form for 12th graders. Thus, corresponding analyses including this item are based on one-sixth of the 12th grade sample.

### **Analysis Strategy**

To examine the hypotheses in the present study, we conducted a series of bivariate and multivariate analyses. To briefly summarize, the six interrelated hypotheses were:

- (1) Preferred work intensity is higher than actual work intensity, with the discrepancy being greater for 8th and 10th graders than for 12th graders.
- (2) Preferred and actual work intensity are significantly correlated, with the correlation being stronger for 12th graders than for 8th and 10th graders.

- (3) Preferred work intensity (as well as actual work intensity) correlates negatively with educational success and commitment.
- (4) Preferred work intensity (as well as actual work intensity) correlates positively with substance use.
- (5) Preferred and actual work intensity are equally related to substance use, and in multivariate analyses, preferred work intensity contributes significantly to substance use, above and beyond the contribution of actual work intensity.
- (6) For those students not working for pay, preferred work intensity relates to substance use.

Based on our previous findings that the relationships between work intensity and substance use are not always linear (Bachman & Schulenberg, 1993), we decided to use multiple classification analysis (MCA), a form of dummy-variable simultaneous-entry multiple regression analysis, which permits consideration of nonlinear and linear relations (Andrews, Morgan, Sonquist, & Klem, 1973). An extensive series of analyses was carried out using MCA. Preferred hours of part-time work and actual hours of part-time work, along with background factors and measures of educational success, were used as joint “predictors” of each of the “outcome” variables.<sup>1</sup>

## **RESULTS**

Throughout this paper we use the terms “work intensity” and “student work intensity” interchangeably to refer to hours of student work (nearly always part-time work) during the school year, specifically “hours per week on average during the school year.” Unless otherwise noted, students not working are included and coded as zero intensity.

We begin our presentation of results with univariate descriptive statistics. Next, we present some key bivariate correlational analyses showing how actual and preferred work intensity are related to each other and to indicators of educational commitment. Then we present multivariate analyses using multiple classification analysis (MCA).

### **Preferred Versus Actual Work Intensity**

Figure 1 presents mean levels, for males and females in 8th, 10th, and 12th grades, of (a) actual hours worked per week during the school year (recall that those not working are included and counted as working zero hours), (b) students’ preferred hours of work during the school year, and (c) students’ perceptions of their parents’ preferences regarding the students’ hours of

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<sup>1</sup>We use terms such as those in quotation marks as a matter of convenience, although we recognize that cross-sectional survey data used in this analysis—and in most other studies of the correlates of student work—cannot be classified unambiguously as either “independent” or “dependent” variables.

work. Consistent with Hypothesis 1, the figure shows that, on average, students preferred to work more hours than they actually did.<sup>2</sup>

Also consistent with Hypothesis 1, the discrepancies between actual and preferred work intensity were greater for the 8th grade and 10th grade students than for the 12th grade students ( $p < .01$ , t-test, two-tailed, for each comparison). Such discrepancies arise primarily because of age-related differences in actual work intensity. Preferred work intensity differed much less by age; the figure shows a modest increase (about 3-4 hours) between 8th grade and 10th grade and a smaller increase (about 1-2 hours) between 10th grade and 12th grade ( $p < .01$ , t-test, two-tailed, for each increase).

Given that some of the 12th grade students and substantial proportions of the students in younger grades were not employed at all during the school year (see Table 1), we recomputed the means in Figure 1 with samples limited to those reporting greater than zero hours of paid employment. This limitation did not substantially change mean preferences (they rose only very slightly), but of course the actual hours worked were substantially higher among those in the lower grades when we excluded individuals working zero hours. Nevertheless, these analyses limited to those already holding a paid job still showed that on average those in the lower grades preferred to work more hours than they actually did; however, among employed 12th graders the means for preferred and actual intensity were virtually identical.

The other important finding shown in Figure 1 is that students' own preferences about work intensity were not substantially different, on average, from what they thought their parents would prefer for them. It should be noted, however, that about 10 percent of the 12th graders, 12 percent of the 10th graders, and 16 percent of the 8th graders responded "Don't know" when asked about their work intensity preferences; and larger proportions checked "Don't know" in response to the question about their parents' preferences.

### **Bivariate Correlational Analyses of Preferred and Actual Intensity**

*Preferences correlated with actual hours.* Consistent with Hypothesis 2, the product-moment correlations displayed in the first column of Table 3 show that actual and preferred work intensity were positively correlated at all three grade levels. The correlations were substantially stronger for 12th graders than for younger students, and were also stronger for males than for females in 8th and 10th grades, suggesting that older students and male students had better opportunities to arrange their actual work experience in accord with their preferences. The second column of Table 3 shows that actual work intensity was also correlated with the students' perceptions of how much their parents would want them to work, although these correlations were slightly weaker than those involving their own preferences (first column).

Finally, it is interesting to note in the third column of Table 3 the very strong correlations between students' own preferences and what they perceive to be their parents' preferences about their (the students') work intensity. These high correlations at all grades, coupled with the close

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<sup>2</sup> We also calculated discrepancy scores between actual and preferred work for individuals. We found that in the majority of cases involving discrepancies, the individuals prefer to work more hours than they actually do.

agreement in mean levels shown in Figure 1, suggest that the students in general thought their preferences about whether and how much they should work were in accord with their parents' wishes. At the same time, we should bear in mind the appreciable proportions of students, especially in the lower grades, who responded "Don't know" to the preference questions.

*Correlations with educational commitment.* Table 4 presents results of correlational analyses in which educational commitment measures predict actual and preferred work intensity. The data show, consistent with earlier research, that actual work intensity tends to be negatively correlated with indicators of educational commitment—specifically, college plans, college prep curriculum, grade point average, and parents' educational attainment. Most of these relationships were very close to linear (eta coefficients, which capture both linear and non-linear correlation, were only slightly higher than their corresponding product-moment correlations, which capture only linear correlation).

The more important finding in Table 4, given our present focus, is that preferred work intensity was also negatively correlated with the indicators of educational commitment. This is consistent with Hypothesis 3 and supports our view that preferred work intensity is part of a P-A Syndrome that includes a reduced commitment to education. Moreover, Table 4 shows that the negative correlations involving preferred work intensity were invariably stronger than the corresponding ones involving actual work intensity. Indeed, among the young women in all three grades the negative links with educational commitment were two to three (or more) times stronger for preferred work intensity than for actual work intensity. The disparity was evident among the young men also, but not as strongly or consistently as for the women.

It can also be seen in Table 4 that the linkages between the work intensity measures and the educational commitment indicators were generally stronger among older students (i.e., those in the higher grades). Most of this change with respect to preferred intensity occurred between 8th and 10th grades, whereas the links between actual intensity and educational commitment did not reach full strength until 12th grade.

In sum, the bivariate correlational data summarized in Table 4 show largely linear negative relationships between educational commitment and the work intensity measures. Most notably, the links with preferred intensity arose earlier and remained stronger than those with actual intensity. This is entirely consistent with the notion that a preference for heavy involvement in part-time work is an early emerging indicator of the P-A Syndrome among students.

### **Correlations With Background Factors**

One of the reasons that young people might wish to work is to help out with family finances. Although most high school seniors contribute little or none of their earnings to help pay family living expenses (see Appendix C), we thought it worthwhile to examine whether family socioeconomic level or race/ethnicity or both related to preferred work intensity. The only available proxy for family socioeconomic level in our surveys was parental education level; because education is positively correlated with earnings and job status, socioeconomic is lower, on average, in families with less-educated parents.

As can be seen in Table 4, preferred work intensity showed consistently negative correlations with parental education. This could indicate that students from less wealthy families were more likely to seek work in order to contribute some of their earnings to help pay family living expenses, or that wealthy families encouraged their children to concentrate on things other than work, or both. We considered these possibilities further by examining 12th grade employed students' reports of whether any of their earnings were used to help pay family living expenses. Looking at race/ethnicity and parental education simultaneously, we found the following: (a) with parental education controlled, African-American students were most likely, Hispanic students next most likely, and White students least likely to report helping with family expenses; (b) within each of the three subgroups, the higher the level of parental education, the less likely the student was to report helping with family expenses; and (c) these relationships were additive, with no clear evidence of interaction (see Figures 2a and 2b).

We also examined race/ethnicity and parental education as joint predictors of preferred work intensity at each of the three grades. A clear negative relationship was evident among White students in each grade, whereas among African-American and Hispanic students preferred work hours were less likely to decline at the higher levels of parental education (see Figures 3a, 3b, and 3c).

### **Multivariate Analyses Involving Work Intensity and Preferences**

We conducted a series of multivariate analyses to examine how actual and preferred work intensity are related to eight outcome variables—four different dimensions of drug use, three other dimensions of problem behavior, and one measure of adequacy of sleep. For each of these eight dimensions, we conducted analyses separately for males and females at each of the three grades, thus yielding the 48 rows in Table 5 ( $8 \times 2 \times 3 = 48$ ).

Based on previous findings that the relationships between work intensity and substance use are not always linear (Bachman & Schulenberg, 1993) and taking into account that some researchers (e.g., Greenberger & Steinberg, 1986; Steinberg, Fegley, & Dornbusch, 1993) have suggested that outcomes may deteriorate markedly (i.e., non-linearly) when student work exceeds 20 hours per week, we used multiple classification analysis (MCA) for our multivariate analyses. MCA is a form of dummy-variable simultaneous-entry multiple regression analysis; it uses categorical predictors and thus is sensitive to nonlinear as well as linear relations (Andrews, Morgan, Sonquist, & Klem, 1973).

Each row in Table 5 presents a distillation of the findings from five MCAs (four based on the total samples, and one based on the nonworking subgroup); the findings shown in the table are summary relationships linking actual work intensity and preferred work intensity with the outcome variable. A more extensive reporting of MCA results is provided in Appendix A. In the section on cigarette use, immediately below, we provide a detailed illustration of our logic in using the MCA results shown in the table. Thereafter, as we consider each of the other outcome variables, we summarize key findings relying on the same logic as used in the section on cigarette use.

## Work Intensity and Preferences Linked with Use of Drugs

*Cigarette use.* We begin by considering bivariate and multivariate relationships between *actual* work intensity and smoking. Overall, we find that the more hours students worked in part-time jobs, the more likely they were to be smokers. Specifically, beginning with the 12th grade male students, the first entry in row 1 of Table 5 is an eta coefficient of .181, which shows a moderate bivariate correlation between actual work intensity and use of cigarettes. Although eta coefficients capture both linear and non-linear relationships, inspection of the mean smoking rates for each category of part-time work (see Figure 4) reveals that the relationship is positive and nearly linear. The one exception to linearity is a tendency, especially among women in 12th grade, for those working zero hours to have slightly higher smoking rates than those working only 1-5 hours.

When measures of educational success and background are included as predictors, the predictive value of work intensity among young men in 12th grade drops (by about one-third) to a beta of .119 (see the second entry in row 5 of Table 5, see also the dashed line in Figure 4). For the young women in 12th grade, the corresponding coefficients (shown in row 6 of Table 5) are an eta of .157, which drops (by about one-fourth) to a beta of .116 when educational success and background are controlled. All of the above findings, which link smoking with actual work intensity among 12th grade students from the classes of 1992-1998, closely replicate our earlier findings from the classes of 1985-1989 (Bachman & Schulenberg, 1993).

The coefficients for 10th grade students (first two entries in rows 3 and 4 in Table 5) are fairly similar to those for 12th graders, although slightly lower. The coefficients for 8th grade students are lower yet, but still show a positive link between work intensity and smoking that is only partly reduced with controls for educational success and background. At all grade levels, the link between work intensity and cigarette use is somewhat lower for the females, although this gender difference dissipates when controlling for educational success and background.

We now turn our attention to the links between *preferred* work intensity and smoking, as shown in the fourth and fifth columns in Table 5. We note first that the bivariate relationships (eta coefficients) in the fourth column show that in all three grades preferences for part-time work are correlated with smoking; specifically, the greater the level of work intensity preferred, the more the student is likely to be a smoker and the higher the likely level of cigarette consumption. These relationships are largely linear, with one important exception now evident for both males and females at all grades: smoking rates are higher among those preferring zero hours of work compared with those preferring very few hours of work (see Figure 4). When the eta values in the fourth column of Table 5 are compared with those in the first column, it is evident that smoking among 8th and 10th grade students is more strongly correlated with preferred work intensity than with actual work intensity, whereas for 12th grade students the correlations are roughly equal. After controls for educational success and background, a strong connection remains (as indicated by the coefficients in the fifth column).

Thus far we have reviewed findings for actual work intensity and preferred work intensity separately; now let us consider their relationships with smoking when the two intensity measures are included in the same predictive equations. The key results are presented in the third (Beta 2) and sixth (Beta 3) columns of Table 5, showing the predictive contribution of each

intensity dimension when both are included as predictors of smoking (along with the educational success and background measures). As suggested by Hypothesis 5, it is clear that there is some marginal contribution from preferences above and beyond the contribution from actual work intensity. Indeed, consistent with the comparison of bivariate correlations above, it is evident that preferred work intensity turns out to be a stronger predictor of smoking than actual work intensity, especially for females in the younger grades.

Another way of checking whether preferred work intensity has relationships independent of actual intensity is to restrict our analyses to those who report no part-time work during the school year. Results of MCAs limited to this subsample are presented in the seventh and eighth columns of Table 5. The findings are generally quite similar to those for the full sample (fourth through sixth columns). The bivariate eta coefficients for the restricted subsample (seventh column) are slightly lower than those for the full sample (fourth column). More important, the “Beta 1” coefficients (controlling for background and educational success) for the restricted sample (eighth column) are generally very close to the corresponding “Beta 3” coefficients (sixth column), which is quite reassuring given that they reflect two quite different ways of examining the possible effects of preferences while controlling the possible effects of actual work intensity.

Summarizing the findings on smoking in Table 5, we find clear support for all aspects of Hypotheses 4, 5, and 6. Preferred work hours correlate positively with smoking; they are not weaker than those involving actual work hours but rather are stronger some of the time; and a good deal of the possible impact of preferred work intensity on smoking is independent of (i.e., non-overlapping with) the possible impact of actual work intensity on smoking.

*Alcohol use.* Table 5 presents data for two measures of alcohol use: number of occasions of any use during the past 30 days (rows 7-12), and number of occasions involving five or more drinks during the past two weeks (rows 13-18). Because the results are quite similar, we discuss findings for both alcohol use indicators together. Among 8th graders, preferred work intensity correlates with alcohol use, both bivariate and multivariate, at about the same levels as were found for cigarette use. Among 8th grade females, the parallels between alcohol use and cigarette use continue: actual work intensity related less strongly than did preferred work intensity. But the two work intensity dimensions showed roughly equal relationships with alcohol use among 8th grade males, and among both males and females in the later grades.

Unlike the findings for cigarette use (and also unlike the findings for marijuana use, reported below), the links between alcohol use and the work intensity dimensions show a fairly consistent weakening with increasing age as we move from 8th grade to 10th and 12th grades (see Figure 5), even though the amount of alcohol consumption (and thus the variance to be explained) increases substantially across those years, especially among males (see Table 2). It is important to note that these increases in alcohol use correspond to a reduced predictability of such use between 8th grade and 12th grade, not just by the work intensity measures but also by grade point average and our other predictors (as can be seen in Appendix A). In other words, it appears that alcohol use among older students is less closely or distinctively linked with premature adulthood.

We believe this shift with age reflects the fact that between 8th grade and 12th grade, alcohol use changes from being the exception to being the rule. For example, in 1998 fewer than

one-quarter of 8th graders reported alcohol use during the preceding 30 days, whereas for 12th graders the proportion was more than half; similarly, more than half of 8th graders reported no alcohol use during the entire preceding year, whereas three-quarters of seniors reported some use and about half of them reported at least one instance of being drunk during the year (Johnston et al., 1999). Thus alcohol use appears to be much more “premature”—at least in the statistical sense of not being the “norm”—in 8th grade compared with 12th grade. Importantly, this is not the case for cigarette use or marijuana use; even among the 12th graders in 1998 these were less typical (and arguably more deviant) behaviors, because fewer than one-quarter were regular (i.e., daily) cigarette smokers and fewer than one-quarter reported any use of marijuana in the past 30 days (Johnston et al., 1999).

Overall, the findings for alcohol provide support for Hypotheses 4, 5, and 6. Preferred work hours correlate positively with total monthly use and with instances of heavy drinking; these relationships are generally about equal to those involving actual work hours; and the relationships with preferred work intensity are largely non-overlapping with the relationships involving actual work intensity (as evidenced by the analyses of the total samples, and of the nonworking subsets shown in the right-hand two columns of Table 5).

*Marijuana use.* The findings for marijuana use also provide support for Hypotheses 4, 5, and 6; however, the relationships are weaker than those found for other drugs. Nevertheless, we find a consistent pattern of higher rates of marijuana use among those who prefer to work relatively long hours, as well as among those who actually do work long hours (see Figure 6). The bivariate eta statistics for preferences are generally a bit stronger than those for actual work intensity, particularly at the lower grades. Similarly, at the multivariate level there is a tendency for relationships involving preferences (Beta 3 column) to be slightly larger than those involving actual intensity (Beta 2 column).

The findings for marijuana use, like those for the other drugs, show an important departure from linearity in the link between drug use and preferred work intensity. Average usage levels are somewhat higher among those who prefer zero hours of work, compared with those who prefer only small amounts of work (see Appendix A for detailed bivariate and multivariate patterns of relationship).

### **Work Intensity and Preferences Linked with Other Deviant Behaviors**

The remaining measures examined in this paper appear on single questionnaire forms for the 12th grade respondents. This means that the relationships with actual work hours involve smaller numbers of cases than was true for the drug use analyses. More important, because the questions asking 12th graders about preferred work hours appeared on a different form than the dependent variables examined below, it was not possible to include those relationships in the analyses. Nevertheless, we included the limited data available for the 12th graders because they provide an opportunity for further replication of the findings in our previous study (Bachman & Schulenberg, 1993).

*Interpersonal aggression.* Consistent with our earlier research, interpersonal aggression was positively linked to actual work intensity among 12th graders, particularly males, and controls for background and educational success reduced the relationship only modestly (see

Table 5). Among students in the lower grades, similar (or slightly stronger) relationships appeared with actual work intensity; again, these were stronger for males than for females and were only modestly affected by controls for educational success and background. The fact that these relationships were only modestly affected by the controls suggests to us that the actual work experiences may be contributing rather directly to interpersonal aggression, above and beyond any link with the P-A Syndrome.

Turning now to preferred work intensity among 8th and 10th grade students, the data for males (see Table 5) indicate relationships that are roughly equal in size to those involving actual intensity; however, the controls for background and educational success produce somewhat greater reductions (comparing Eta with Beta 1) than we found for actual work intensity. When both intensity measures appear in the same equation, the coefficients (Beta 2 and Beta 3) are roughly equal. There is some tendency, however, for actual work hours to contribute more strongly among 8th grade males. Among females (in both grades) preferred work intensity is a stronger predictor than actual work intensity. The total pattern of findings for interpersonal aggression provide further support for our view that preferred work intensity is an early emerging component of the P-A Syndrome, and that interpersonal aggression may be another such early emerging component.

*Victimization.* Again consistent with our earlier research, victimization among high school seniors is positively related to their hours of work. Specifically, as work intensity increases above 20 hours per week, victimization becomes increasingly likely, and it increases sharply for the relatively small subgroup working 31 or more hours. Here again the controls for background and educational success have virtually no effect (see Table 5 and Appendix A), which suggests to us that working particularly long hours may somehow place 12th grade students at greater risk for victimization.

Much the same holds true for the actual work experiences of 8th and 10th grade students (see Table 5 and Appendix A). Additionally, preferred work intensity among these students is positively related to victimization, and these relationships are little affected by controls for background and educational success.

*Theft.* At all three grades, the relationships between actual work intensity and theft behaviors are all fairly modest, and are slightly reduced by controls for background and educational success (see Table 5). Moreover, the patterns are “bumpy” rather than clearly linear, although generally there is a tendency for those working longer hours to report more instances in which they have engaged in theft (see Appendix A).

Among students in 8th and 10th grades, theft is more strongly and consistently correlated with preferred work intensity than with actual intensity (see Table 5 and Appendix A). The relationships are fairly linear (those whose preferences are to work longer hours are more likely to report having engaged in theft), with the important exception that those desiring not to work at all are more likely to engage in theft than those preferring to work for only a few hours.

## **Work Intensity and Preferences Linked with Getting Enough Sleep**

We included in these analyses our measure of hours of sleep (specifically, how often respondents get at least seven hours of sleep) because this measure, among all of those we examined in our earlier paper, seemed the most likely to be directly influenced by part-time work experiences. There is a very plausible line of causation directly from a student's heavy engagement in part-time work to an inadequate amount of time for sleep. Our earlier research showed such a strong relationship, and also showed no effect at all as a result of adjustments for background and educational success (Bachman & Schulenberg, 1993). We expected to replicate that finding here, with more recent samples of high school seniors. More important, we thought it likely that among the 8th and 10th grade students (the only ones for whom the data were available), the sleep measure would show stronger relationships with actual work intensity than with preferred work intensity.

As can be seen in Table 5 (see also Appendix A), the findings for high school seniors show a sharp decline in sleep as hours of work increase, and this relationship is virtually unaffected by controls for background and educational success. Among students in 8th and 10th grades, similar relationships appear (see Appendix A); however, the coefficients are weaker (see Table 5), due at least in part to the lower variance in actual work intensity among students in the lower grades.

Preferred work intensity among students in 8th and 10th grades is also linked with likelihood of getting at least seven hours of sleep. Among the 8th grade students, the relationship is stronger than for actual work intensity; however, it is far from linear. The 8th graders most likely to get seven or more hours of sleep per night are those who would like to be working 5-15 hours per week; above that, increased work preferences are associated with decreased proportions getting seven hours of sleep. Here again, amount of sleep is lower among the small segment of students whose preference is for zero work compared with those preferring a modest amount of part-time work during the school year. The same pattern holds for 10th grade students, except that for them the relationships with actual work intensity are a bit stronger than those with preferred intensity.

## **Zero Work Preference as a Special Category**

Students who prefer zero hours of part-time work during the school year are atypical, if only in the statistical sense. As can be seen in Table 1, only about one in twenty students selected zero as the preferred amount of paid part-time work during the school year. More important, although our measure of preferred work hours generally correlated positively with problem behaviors, the students who preferred zero hours of work were not lowest in problem behaviors; in fact, those students were actually above the overall average for most problem behaviors. This pattern is clear for smoking behaviors (see Figure 4), and it is evident also for most other dimensions we examined (as reported in Appendix A). These findings are not consistent with Hypothesis 4, and that prompted us to take a closer look also at the patterns of relationship predicted by Hypothesis 3.

Specifically, if individuals preferring zero work hours have lowest involvement in the P-A Syndrome, then those individuals should also have highest scores on our measures of

educational success and commitment. In fact, that is only partially true. Consistent with Hypothesis 3, we found that the students who preferred zero hours of work were more likely to have grade point averages of A than those students who would choose to work only a few hours; and with higher levels of preferred work intensity, average grades steadily declined. But not consistent with Hypothesis 3 is the finding that the zero preferred hours category also contained more students with low grade point averages than did the categories preferring a modest amount of part-time work. It thus appears that although some of the students who chose not to work may have done so in order to maintain their high levels of academic performance, some of the others who preferred zero hours may have different patterns of motivation. It is beyond the scope of the present paper to pursue these matters further, but we hope to do so in future work.

## DISCUSSION

In this paper we examined the part-time work intensity *preferences* of nationally representative samples of 8th, 10th, and 12th grade students, surveyed from 1992 through 1998, and found that these preferences are related to measures of educational success and drug use as well as other problem behaviors. We think preferred work intensity is of interest in its own right, but it is important also because it opens an additional window to understanding why *actual* part-time work intensity is related to drug use and other problem behaviors.

### **Developmental Progression From Wishing to Working**

By the time they reach 8th grade, most students in the United States wish to be employed in paid work during the school year; however, the majority are not actually working, and those who do have jobs work relatively few hours—usually much fewer than they prefer. The story is much the same for students in 10th grade, except that those who do have jobs work more hours on average than the 8th graders—although still well below preferred numbers of hours in most cases. By the time they reach 12th grade, most students are, in fact, employed in part-time jobs during the school year. Moreover, by 12th grade the discrepancies between preferred and actual hours of work tend to be much lower. In sum, consistent with Hypothesis 1, our findings indicated that for most students the desire for employment (during the academic year) emerges several years earlier than it becomes a reality (see Figure 1). We can only speculate whether 6th and 7th graders also would prefer to be working—we suspect many would. But based on the present data alone it appears that the lag between wish and fulfillment is more than two years for most adolescents.

Consistent with Hypothesis 2, students' actual and preferred work intensity are positively correlated. Even in 8th grade, when most students' wishes for work are unfulfilled, there are moderate positive correlations (product-moment  $r = .28$  for males,  $.20$  for females). By 12th grade, when many more are employed, the correlations are substantially higher ( $r = .42$  for males,  $.41$  for females); nevertheless, these correlations also indicate that even in 12th grade the match between wishes and actual work is far from perfect.

### Links With Educational Disengagement

Some students are more likely than others to wish for heavy part-time workloads during their student years. Specifically, individuals with poorer grades and those not planning to enter college are more likely to desire, and eventually attain, relatively high levels of work intensity during the school year, consistent with Hypothesis 3. The negative correlations between grades and preferred intensity are modest among 8th graders ( $r = -.11$ ) but stronger among 10th and 12th graders ( $r = -.20$  or  $-.21$ ). The correlations between grades and actual work intensity are negative also, but much weaker (see Table 4). These results suggest that students who are not doing well in school look elsewhere for their identity and highly anticipate the opportunity to try on the role of worker.

An important developmental task during adolescence is to gain a sense of autonomy and competence. In general, school systems in the United States do not provide an abundance of such opportunities; consequently, some adolescents may become detached from the younger student role and instead search for alternative, more adult-like identities (e.g., part-time worker) to achieve personal fulfillment (Bachman & Schulenberg, 1993). For many individuals the disaffection with the student role may occur long before they enter middle and high school. Indeed, numerous studies have demonstrated the high stability of one marker of school attachment: academic achievement (e.g., Alexander & Entwisle, 1988; Ensminger & Slusarick, 1992; Husen, 1969; Reynolds & Bezruczko, 1993). Some of these studies have shown remarkably high degrees of stability between school achievement as early as first grade and school achievement throughout the remainder of formal schooling. As noted later, initial analyses from Monitoring the Future panel data provide further evidence of this stability (Schulenberg et al., under review). Thus, well before they can work legally, most adolescents' patterns of achievement have become firmly established.

### Links With Substance Use

As discussed in the introduction, it has long been known that high school students who work many hours in part-time jobs are more likely than other students to be involved in substance use and other problem behaviors. Those findings were replicated in this paper. More important, this paper also reports the new finding that merely *preferring* high work intensity is positively linked with substance use and other problem behaviors, as shown in Table 5 and illustrated in Figure 4. These relationships were reduced, but not eliminated, in multivariate analyses controlling background and educational success. These findings are consistent with Hypothesis 4.

When preferred and actual work intensity are included together in multivariate analyses, neither is reduced to zero as a predictor. Importantly, however, the relationships with preferred intensity ("Beta 3" column in Table 5) generally equal or exceed those with actual intensity ("Beta 2" column). These findings are consistent with Hypothesis 5.

Finally, consistent with Hypothesis 6, when we repeated the substance use analyses with the sample limited to nonworking students, we still found that the higher their preferred level of work intensity, the more likely the student is to be involved in substance use. Indeed, the multivariate coefficients in the final column of Table 5, based on students not working, are

roughly equivalent to the coefficients based on the total samples with actual work intensity controlled statistically (i.e., the “Beta 3” coefficients). These findings show quite clearly that those students who *wish to* work long hours are also the students more likely to use cigarettes, alcohol, and other drugs, and a part of that relationship remains even after imposing controls for background and educational success. Although some “non-working” students may have held prior jobs (which could influence preferred work), the findings replicate even for 8th graders, who are unlikely to have had much prior work experience. Thus, these findings among students who do not actually hold a job suggest that we cannot blame the relationship between preferred work and problem behaviors on long work hours, excess earnings, work pressures, or anything else about their non-existent jobs.

The various forms of substance use examined here showed different strengths and patterns of relationship with the work intensity measures. These differences provide further clues about the extent to which each of the drug use behaviors may be incorporated within, and thus provide an indicator of, what we have been calling the P-A Syndrome. Among the drug use behaviors, cigarette use is most strongly and consistently correlated with preferred work intensity. In contrast, the alcohol use measures show strong correlations involving 8th graders, whereas among 12th graders the relationships are weak and often fell short of statistical significance. We noted earlier that this dissimilarity may reflect the different degrees of deviance involved in these two forms of substance use. Regular cigarette use remains the behavior of choice for only a minority of students throughout secondary school, and also into young adulthood (Bachman, Wadsworth, O’Malley, Johnston, & Schulenberg, 1997). Occasional alcohol use, even instances of heavy drinking, is much more common by the end of high school, and thus less deviant (at least in the statistical sense of departing from the norm). The findings for marijuana use show a pattern similar to those for cigarettes; however, the marijuana relationships are distinctly weaker, perhaps reflecting the overall lower use of marijuana than the other substances. In this connection, it is of interest to note that among high school seniors in 1979, a period when marijuana use was much more popular, hours of work correlated fully as strongly with marijuana use as with cigarette smoking (Bachman, Johnston, & O’Malley, 1981).

### **Links With Other Problem Behaviors and Sleep**

Although substance use behaviors are of primary interest in this paper, our examination of the correlates of preferred and actual work intensity included several other problem behaviors. We found that students in all three grades who worked long hours were more likely to be involved in interpersonal aggression, more likely to commit theft, more likely to be the victims of theft and aggression, and less likely to get seven hours of sleep per night. Among 8th and 10th graders (data were not available for 12th graders), it was equally true that these problem behaviors were more likely among those who desired long hours of work. We view this as further evidence that the desire for (high) work intensity is just as strongly linked with problem behaviors as is actual work intensity. Thus, consistent with previous research (e.g., Krohn et al., 1997; Newcomb & Bentler, 1988; Thornberry, 1997), problem behaviors appear to be operating as part of the premature adulthood syndrome, alongside preferred work hours. But getting adequate sleep is a separate matter; clearly, work intensity relates directly to hours of sleep, whereas preferred work intensity makes no independent contribution.

## **Developmental Implications From Cross-Sectional and Panel Findings**

The analyses reported here are based on large, representative samples of American adolescents drawn from multiple cohorts, thereby permitting relatively firm and generalizable conclusions about cross-sectional relationships. The comparison of data from 8th, 10th, and 12th grade students also provides clear evidence of developmental progressions—most notably, evidence that students' desires for part-time employment emerges a good deal earlier, on average, than their actual experiences of such employment. The additional findings that wishing to work correlates positively with actual work and that these correlations grow stronger from 8th to 10th to 12th grade provide support for a rather obvious causal interpretation: that preferences for work (as measured here) are among the determinants of (subsequent) actual part-time student work. We are beginning to investigate these causal linkages in panel data sets following 8th grade students through 12th grade; preliminary findings suggest that (a) school attachment is highly stable and predictive of preferred work by the time students reach 8th grade and (b) preferred work is predictive of subsequent actual work (Schulenberg et al., under review).

## **Implications for Other Nations**

Our samples were limited to American adolescents, and we believe that their desires to work are heavily influenced by the broad emphasis placed on consumption in the United States. It is thus not clear how closely our findings may apply to adolescents in other countries. Although several researchers have investigated work values (e.g., Vondracek, et al., 1990), apprenticeships (e.g., Heckhausen & Tomasik, 2002), adolescents' perceptions of part-time work (e.g., McKechnie, Lindsay, Hobbs, & Lavalette, 1996), and the school-to-work transition (e.g., Bynner & Parsons, 2002) in samples of adolescents around the world, little is known about students' part-time work preferences.

In general, adolescent part-time work is viewed differently based on contextual factors within a particular country. As examples, within the German apprenticeship system, adolescents in vocational high schools are expected to work as part of their schooling; in Japan, however, most high schools strictly forbid their students to take on part-time jobs, with the possible penalty of school suspension. In light of these differences, it is possible that, compared to American adolescents, fewer German adolescents prefer to work long hours in a part-time job beyond what their schooling already requires, and their work preferences may not be as highly related to substance use and low school achievement. On the other hand, Japanese adolescents' work preferences may be more strongly related to these factors since working is non-normative in this context. In contrast, in the United Kingdom, adolescent part-time work is on the increase, as is continuing in school until age 18 (e.g., Ford et al., 1995; Hodgson & Spours, 2000). Both trends point to an Americanization process (Rikowski, 1992), which suggests that work preferences for adolescents in the United Kingdom may be similar to their American counterparts.

Further investigation of adolescents' work preferences in relation to substance use and school achievement in various countries should provide a broader perspective on the implications of wishing to work. As globalization continues and young people adopt more independent lifestyles (see, e.g., Greenberger, Chen, Beam, Whang, & Dong, 2000), it is likely

that the United States will continue to “export” consumerism to the young people in the world, and with this might come increased wishing to work.

### **Strengths and Limitations**

This study represents a new direction for the part-time work literature, a direction that the present findings suggest will be productive for solving some of the difficult problems regarding causal direction. Important strengths of this study included the use of (a) nationally representative samples of adolescents drawn from multiple cohorts over the past decade to permit relatively firm and generalizable conclusions, (b) sufficiently large samples to permit examination of small but important subgroups (e.g., 12th graders not working for pay), (c) measures that allowed us to compare and contrast preferred and actual work intensity, and (d) multivariate analyses that permitted consideration of non-linear (and linear) relations.

Some limitations, of course, are also worth noting. First, this was a cross-sectional study, leaving open the question of whether preferred work intensity leads to actual work intensity. Future analyses, building upon our new cross-sectional findings presented here, will focus on this question using special panel data. Second, the 12th grade data set is limited somewhat due to comparatively small samples (because not all items of interest here were on all questionnaire forms) and due to exclusion of those adolescents who dropped out of school before their senior year. Third, although there were sufficiently clear patterns in our findings to argue for their substantive significance, many of the significant coefficients were relatively small in magnitude (even allowing for the fact that they represent lower-bound effect sizes due to measurement error). Finally, it is important to note that our findings pertain to the reality of part-time work for most but not all adolescents, as well as to most but not all part-time work experiences available to young people. Indeed, for some adolescents and some types of jobs, work experiences (and prior to experience, preferred work arrangements) can be positive and even salutary for current well-being and future success.

### **CONCLUSIONS**

Overwhelming majorities of students, beginning no later than 8th grade (and quite possibly earlier), wish that they could be working in paid jobs during the school year. Among them, some would choose to work only 1-10 hours per week, and our findings show that individuals with these modest work aspirations are least likely to engage in substance use and other problem behaviors. But larger proportions of students desire to work longer hours, and many prefer more than 20 hours per week.

Students who wish to work long hours while still in school are more likely than average to smoke cigarettes, to use alcohol and other substances, and to engage in other problem behaviors. The same can be said for those who actually do work long hours while they are students. But a key finding of this research is that the wishes generally emerge years earlier than the actual work. Moreover, poor grades and lack of college plans show stronger correlations with preferred work intensity than with actual work intensity. Does it follow that instead of trying to dissuade students from actually working long hours we should try to dissuade them from even *wanting* to do so? Such an approach might provide a head start in dealing with some problems. Moreover, we can see broad advantages to dissuading adolescents from excess consumerism—

the desire to work a lot, in order to earn a lot, in order to spend a lot (primarily discretionary spending, as shown in Appendix C).

From a policy perspective, then, we must provide attractive alternative identity options for adolescents exhibiting features of the P-A syndrome. One possibility is early intervention to increase students' attachment to a school-based identity. Yet, for adolescents already committed to the worker role (and premature adulthood), we must provide other, more positive ways to act in an adult-like manner. Activities that involve leadership skills and responsibility are a good place to start. A number of school-to-work initiatives have attempted to integrate school and work roles with some success (e.g., Hamilton 1990; Olson 1997). Another method is to increase student leadership skills within the classroom setting. For instance, we could envision classrooms in which students take turns in leading the class, or classroom decisions are made through student vote, or scope of student-led projects or presentations are increased. In other words, we can give adolescents the opportunity to try on an adult "hat" in a constructive manner.

We do not conclude that preferred work intensity should supplant actual work intensity as a primary "villain" contributing to drug use and other problem behaviors, because we do not consider either dimension to be primary in the causal sequence. Rather, we think both dimensions are largely symptoms of deeper and prior problems, most notably a lack of success and positive identification with schooling and the role of student. The fact that the wish for extensive work precedes the actual experience by several years, in most cases, simply helps to make this fundamental point: wanting to work a lot while still a student is a signal of (a) suboptimal adjustment to the student role and (b) a premature focus on certain trappings (i.e., smoking, drinking, big spending) that some adolescents may associate with adulthood. Of course, students who succeed in obtaining their desired long hours of employment during their last year or two of high school may, as a consequence, cause themselves additional problems such as lack of sufficient sleep and inadequate time for other things such as homework; but the stubborn fact remains that the more basic problems such as poor grades, smoking, and other substance use tend to be evident much earlier than the long hours of work.

The perspective outlined here leads us to stress the value of early prevention efforts targeting school adjustment and performance. Increased efforts to make young students successful in school and positive about their educational experiences may not only reduce the risks of smoking and other substance use, but also provide valuable protection against a whole cluster of problem behaviors, including the desire to spend excessive amounts of time in paid work during the school year, when other things (e.g., making good use of educational opportunities, getting adequate time for sleep) should come first.



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**TABLES**

**Table 1**  
**Part-Time Work Status, Work Intensity, and Preferred Work Intensity by Gender:**  
**8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> Grade Students in 1992-1998**

Variable	Percentages <sup>a</sup>					
	8 <sup>th</sup> Male	8 <sup>th</sup> Female	10 <sup>th</sup> Male	10 <sup>th</sup> Female	12 <sup>th</sup> Male	12 <sup>th</sup> Female
<u>Work Status</u>						
Not working	55.8	61.4	52.6	59.6	25.0	24.3
Working for pay	42.0	36.6	45.5	38.3	68.0	68.1
Working not for pay	2.2	2.0	1.9	2.1	7.0	7.6
N (Total)	59,866	63,092	52,679	54,792	48,481	53,317
<u>Hours Paid Work per Week<sup>b</sup></u>						
0	57.1	62.7	53.6	60.8	26.9	26.3
1-5	21.2	21.8	11.6	12.8	6.9	6.8
6-10	9.7	8.9	8.5	8.4	8.6	9.6
11-15	4.2	2.8	7.0	5.6	10.0	12.4
16-20	3.2	1.7	8.0	6.1	15.2	17.1
21-25	1.7	0.8	5.4	3.3	12.7	12.8
26-30	0.9	0.5	3.1	1.8	9.2	8.2
31 or more	1.9	0.8	2.8	1.1	10.5	6.8
N (Total)	58,543	61,857	51,677	53,652	45,077	49,286
<u>Preferred Work Hours<sup>c</sup></u>						
0	5.2	3.5	4.8	3.5	7.9	5.4
1-5	13.3	16.9	5.5	7.8	3.1	4.3
6-10	21.8	26.0	13.9	18.4	8.4	11.5
11-15	13.1	12.8	13.8	16.3	11.2	15.8
16-20	11.9	9.7	17.6	17.0	19.0	21.4
21-25	7.1	5.6	13.1	11.0	14.9	14.3
26-30	5.0	3.4	8.9	7.1	11.0	10.0
31 or more	8.2	3.8	10.8	5.5	13.1	8.2
Don't know	14.3	18.3	11.5	13.4	11.2	9.2
N (Total)	58,646	62,174	51,772	53,787	7,661	8,296
<u>Parental Preferred Work Hours<sup>d</sup></u>						
0	8.1	7.7	9.9	12.4	11.1	12.0
1-5	14.0	19.1	7.5	11.8	3.8	6.0
6-10	16.9	19.0	12.8	16.4	8.2	11.2
11-15	10.7	10.0	12.9	13.4	11.9	15.3
16-20	8.8	7.2	14.7	12.8	18.2	18.5
21-25	4.8	3.9	7.3	6.1	9.9	8.6
26-30	4.0	2.7	4.9	3.6	6.5	5.0
31 or more	8.8	4.7	8.5	3.9	9.8	4.6
Don't know	23.9	25.6	21.6	19.6	20.5	18.7
N (Total)	53,373	56,342	47,073	48,808	7,658	8,294

<sup>a</sup> For  $N \geq 40,000$ , .05 confidence intervals are  $\leq \pm 0.7\%$ . For  $N \geq 7,600$ , .05 confidence intervals are  $\leq \pm 1.4\%$ .

<sup>b</sup> "On the average over the school year, how many hours per week do you work in a paid job?"

<sup>c</sup> "Think about the kinds of paid jobs that people your age usually have. If you could work just the number of hours that you wanted, how many hours per week would you PREFER to work during the school year?"

<sup>d</sup> "How many hours per week do you think your PARENTS would prefer that you work in a paid job during the school year?"

**Note.** The category "Working Not for Pay" is excluded from all work intensity and preferred work intensity variables. N's are lower for 12<sup>th</sup> grade preferred work hour variables because items only appear on one form (out of six forms). Preferred and parental preferred work hours include a "don't know" category. These questions refer to perceptions and a substantial proportion of respondents indicated they were not certain. Since the present investigation is concerned with work preferences, we exclude all respondents in the "don't know" category in all subsequent analyses.

**Table 2**  
**Description of Outcome Variables and Means and Standard Deviations by Gender**

Outcome Variable	8 <sup>th</sup>		8 <sup>th</sup>		10 <sup>th</sup>		10 <sup>th</sup>		12 <sup>th</sup>		12 <sup>th</sup>	
	Male		Female		Male		Female		Male		Female	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
<b>Substance Use</b>												
Cigarettes	1.34	0.89	1.32	0.82	1.56	1.13	1.54	1.06	1.77	1.32	1.68	1.20
Alcohol	1.47	1.00	1.41	0.88	1.86	1.31	1.67	1.08	2.34	1.61	1.91	1.26
Binge Drink	1.33	0.92	1.26	0.77	1.62	1.20	1.41	0.95	1.89	1.38	1.45	0.98
Marijuana / Hashish	1.21	0.82	1.15	0.64	1.49	1.27	1.32	0.98	1.67	1.52	1.39	1.09
<b>Problem Behavior</b>												
Interpersonal Aggression	1.52	0.87	1.32	0.62	1.42	0.81	1.20	0.48	1.41	0.76	1.15	0.39
Victimization	1.43	0.62	1.32	0.50	1.37	0.56	1.26	0.42	1.52	0.62	1.34	0.48
Theft	1.50	0.93	1.28	0.67	1.53	0.96	1.27	0.67	1.59	1.00	1.27	0.65
<b>7 Hours' Sleep</b>	4.83	1.41	4.59	1.42	4.46	1.44	4.11	1.43	3.94	1.47	3.70	1.40

*Note.* See Appendix A for question wording and response scales.

**Table 3**  
**Correlations Between Actual, Preferred,**  
**and Parental Preferred Work Hours**

Grade	Gender	Actual & preferred	Actual & parent preferred	Preferred & parent preferred
8	M	.277	.197	.514
8	F	.197	.154	.564
10	M	.334	.228	.550
10	F	.265	.198	.598
12	M	.424	.307	.583
12	F	.410	.323	.584

Note. All correlations are significantly different from zero ( $p < .05$ ). To compare correlates, note that 8<sup>th</sup> and 10<sup>th</sup> graders have 5% confidence intervals  $\leq \pm .010$  and 12<sup>th</sup> graders have confidence intervals  $\leq \pm .026$ .

**Table 4**  
**Correlations Between Actual and Preferred Work Intensity and Educational Measures**

Grade	Gender	Work hours	College plans	HS program <sup>a</sup>	GPA	Parent education
			r	r	r	r
8	M	Actual	-.080	-.038	-.072	-.062
		Preferred	-.078	-.050	-.100	-.141
8	F	Actual	-.014	.003 ns	-.029	.005
		Preferred	-.066	-.042	-.106	-.162
10	M	Actual	-.119	-.106	-.099	-.093
		Preferred	-.186	-.172	-.203	-.220
10	F	Actual	-.048	-.048	-.064	-.056
		Preferred	-.147	-.143	-.191	-.226
12	M	Actual	-.149	-.133	-.092	-.133
		Preferred	-.222	-.226	-.197	-.226
12	F	Actual	-.069	-.064	-.070	-.097
		Preferred	-.182	-.194	-.201	-.238

<sup>a</sup> College preparatory coded 1; all others coded 0.

Note. Correlations with 12<sup>th</sup> grade preferred work intensity have confidence intervals  $\leq \pm .026$ . All other correlations have confidence intervals of  $\leq \pm .010$

ns = non-significant at  $p < .05$ .

**Table 5**  
**Substance Use, Problem Behaviors, and Sleep**  
**Predicted by Actual and Preferred Work Intensity**

Outcome Variable	Grade & Gender <sup>a</sup>	Work Intensity							
		Actual Work Hours			Preferred Work Hours				
		Eta	Beta 1	Beta 2	Eta	Beta 1	Beta 3	Non-Working Subset	
		Eta	Beta 1				Eta	Beta 1	
<u>Substance Use</u>									
Cigarettes	8 M	.115	.085	.066	.141	.100	.086	.124	.091
	8 F	.087	.062	.041	.145	.114	.106	.125	.105
	10 M	.157	.103	.076	.180	.114	.089	.150	.097
	10 F	.149	.103	.073	.176	.129	.107	.140	.101
	12 M	.181	.119	.088	.184	.131	.105	.143	.088ns
	12 F	.157	.116	.085	.143	.122	.094	.106	.128
Alcohol	8 M	.149	.128	.110	.146	.117	.095	.117	.096
	8 F	.084	.069	.054	.128	.104	.096	.111	.095
	10 M	.138	.106	.084	.151	.106	.083	.114	.076
	10 F	.092	.070	.052	.112	.087	.074	.102	.078
	12 M	.102	.078 ns	.062 ns	.096	.071 ns	.051 ns	.116 ns	.081ns
	12 F	.089	.068 ns	.065 ns	.050 ns	.050 ns	.038 ns	.064ns	.072ns
Heavy Alcohol	8 M	.161	.135	.120	.143	.107	.082	.114	.088
	8 F	.091	.075	.063	.119	.090	.080	.099	.080
	10 M	.130	.095	.077	.145	.095	.075	.113	.075
	10 F	.083	.060	.047	.099	.069	.058	.075	.051
	12 M	.065 ns	.035 ns	.028 ns	.085 ns	.062 ns	.061 ns	.111 ns	.080ns
	12 F	.082 ns	.062 ns	.058 ns	.057 ns	.050 ns	.038 ns	.086ns	.087ns
Marijuana or Hashish	8 M	.074	.056	.043	.098	.074	.065	.099	.077
	8 F	.057	.042	.031	.092	.073	.068	.087	.078
	10 M	.079	.049	.036	.102	.063	.054	.098	.063
	10 F	.102	.076	.060	.107	.076	.060	.098	.072
	12 M	.055 ns	.042 ns	.043 ns	.075 ns	.053 ns	.057 ns	.125 ns	.088ns
	12 F	.072 ns	.054 ns	.046 ns	.057 ns	.047 ns	.036 ns	.086 ns	.098ns
<u>Problem Behaviors</u>									
Interpersonal Aggression	8 M	.178	.160	.144	.151	.118	.091	.132	.095
	8 F	.090	.088	.078	.152	.121	.115	.135	.109
	10 M	.148	.124	.102	.174	.123	.097	.159	.108
	10 F	.105	.079	.055	.150	.109	.094	.148	.106
	12 M	.139	.105						
	12 F	.094	.077						
Victimization	8 M	.101	.097	.086	.083	.081	.066	.070	.067
	8 F	.097	.097	.083	.122	.112	.101	.112	.106
	10 M	.073	.071	.064	.085	.072	.065	.070	.061
	10 F	.075	.079	.071	.079	.061	.049	.044	.030
	12 M	.105	.109						
	12 F	.119	.114						

Table 5 continues

Table 5, continued

Outcome Variable	Grade & Gender <sup>a</sup>	Work Intensity							
		Actual Work Hours				Preferred Work Hours			
		Eta	Beta 1	Beta 2	Eta	Beta 1	Beta 3	Non Working Subset	
							Eta	Beta 1	
Theft	8 M	.064	.057	.044	.105	.092	.087	.118	.102
	8 F	.057	.049	.040	.097	.089	.086	.100	.095
	10 M	.065	.054	.039	.100	.081	.075	.095	.070
	10 F	.078	.063	.044	.110	.099	.090	.107	.097
	12 M	.069	.060						
	12 F	.085	.079						
<u>7 Hours' Sleep</u>	8 M	.062	.047	.042	.070	.047	.042	.068	.047 ns
	8 F	.049	.036 ns	.033 ns	.076	.061	.060	.068	.057
	10 M	.108	.091	.084	.080	.057	.035 ns	.056	.045 ns
	10 F	.121	.106	.092	.092	.083	.061	.089	.091
	12 M	.201	.185						
	12 F	.193	.183						

Note: Eta coefficients express the bivariate correlation (both linear and nonlinear) between each predictor and each outcome variable. Beta coefficients express the multivariate association when background factors are controlled (Beta 1). Beta 2 controls also for preferred work hours. Beta 3 controls also for actual work hours. N's vary based on gender and grade. For 12<sup>th</sup> graders, preferred work hours appear only on one form. In all analyses, we used only those cases with data for preferred work hours in order to make comparisons. Thus, 12<sup>th</sup> grade N's are generally lower. Also, specific to 12<sup>th</sup> grade is that preferred work hours appears on a different form than problem behaviors and sleep (thus these eta's and beta's do not appear in table) and some items appear on only one form (i.e., victimization and sleep) or two forms (i.e., interpersonal aggression and theft) thus rendering smaller N's. Approximate N's for total sample for each gender: a) drug measures: 8<sup>th</sup> & 10<sup>th</sup> = 40,000; 12<sup>th</sup> = 6-7,000; b) problem behaviors and sleep: 8<sup>th</sup> & 10<sup>th</sup> = 15-17,000; 12<sup>th</sup> = 6,000. The nonworking subset has N's about one-half the size listed above for 8<sup>th</sup> and 10<sup>th</sup> graders, and one-quarter of the size for 12<sup>th</sup> graders.

<sup>a</sup> M = male; F = female; 8 = 8<sup>th</sup> grade; 10 = 10<sup>th</sup> grade; 12 = 12<sup>th</sup> grade.

ns = non-significant at p < .05

**Table 6**  
**Problem Behavior and Sleep Predicted by Actual and Preferred Work Intensity**

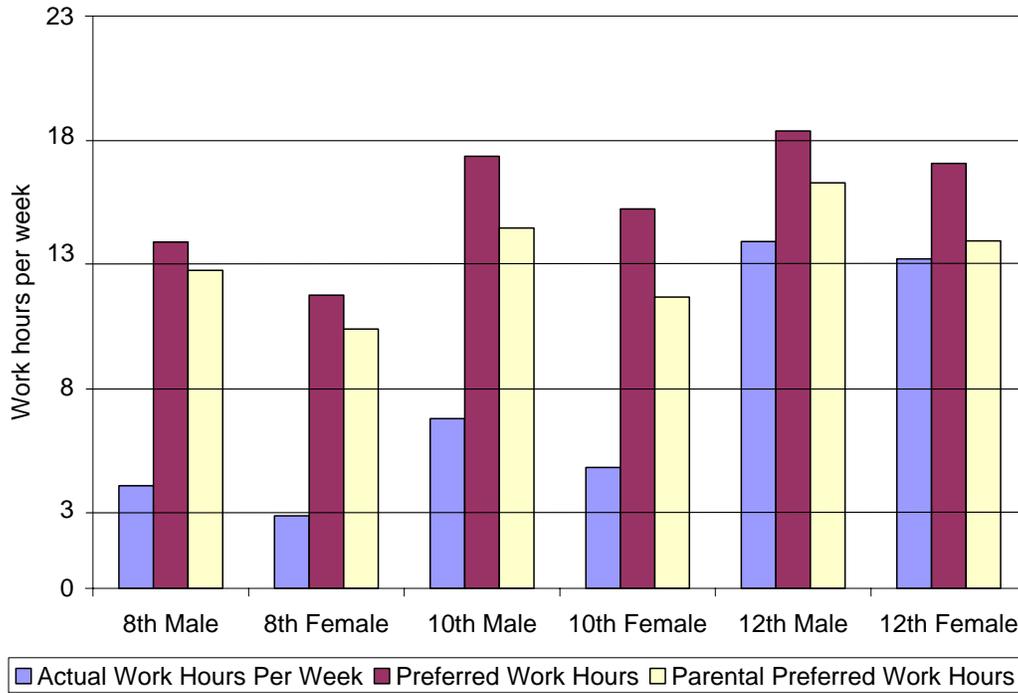
Outcome Variable	Grade & Gender <sup>a</sup>	Work Intensity							
		Actual Work Hours			Preferred Work Hours Non-Working Subset				
		Eta	Beta 1	Beta 2	Eta	Beta 1	Beta 3	Eta	Beta 1
<b>Problem Behaviors</b>									
Interpersonal Aggression	8 M	.178	.160	.144	.151	.118	.091	.132	.095
	8 F	.090	.088	.078	.152	.121	.115	.135	.109
	10 M	.148	.124	.102	.174	.123	.097	.159	.108
	10 F	.105	.079	.055	.150	.109	.094	.148	.106
	12 M	.139	.105						
	12 F	.094	.077						
Victimization	8 M	.101	.097	.086	.083	.081	.066	.070	.067
	8 F	.097	.097	.083	.122	.112	.101	.112	.106
	10 M	.073	.071	.064	.085	.072	.065	.070	.061
	10 F	.075	.079	.071	.079	.061	.049	.044	.030
	12 M	.105	.109						
	12 F	.119	.114						
Theft	8 M	.064	.057	.044	.105	.092	.087	.118	.102
	8 F	.057	.049	.040	.097	.089	.086	.100	.095
	10 M	.065	.054	.039	.100	.081	.075	.095	.070
	10 F	.078	.063	.044	.110	.099	.090	.107	.097
	12 M	.069	.060						
	12 F	.085	.079						
<u>7 Hours' Sleep</u>	8 M	.062	.047	.042	.070	.047	.042	.068	.047 ns
	8 F	.049	.036 ns	.033 ns	.076	.061	.060	.068	.057
	10 M	.108	.091	.084	.080	.057	.035 ns	.056	.045 ns
	10 F	.121	.106	.092	.092	.083	.061	.089	.091
	12 M	.201	.185						
	12 F	.193	.183						

**Note.** Eta coefficients express the bivariate correlation (both linear and nonlinear) between each predictor and each outcome variable. Beta coefficients express the multivariate association when background factors are controlled (Beta 1). Beta 2 controls also for preferred work hours. Beta 3 controls also for actual work hours. N's vary based on gender and grade. For 12<sup>th</sup> graders, preferred work hours appear only on one form. In all analyses, we used only those cases with data for preferred work hours in order to make comparisons. Thus, 12<sup>th</sup> grade N's are generally lower. Also, specific to 12<sup>th</sup> grade is that preferred work hours appears on a different form than problem behaviors and sleep (thus these eta's and beta's do not appear in table) and some items appear on only one form (i.e., victimization and sleep) or two forms (i.e., interpersonal aggression and theft) thus rendering smaller N's. Approximate N's for total sample for each gender: 8<sup>th</sup> & 10<sup>th</sup> = 15-17,000; 12<sup>th</sup> = 6,000. The nonworking subset has N's about one-half the size listed above for 8<sup>th</sup> and 10<sup>th</sup> graders, and one-quarter of the size for 12<sup>th</sup> graders.

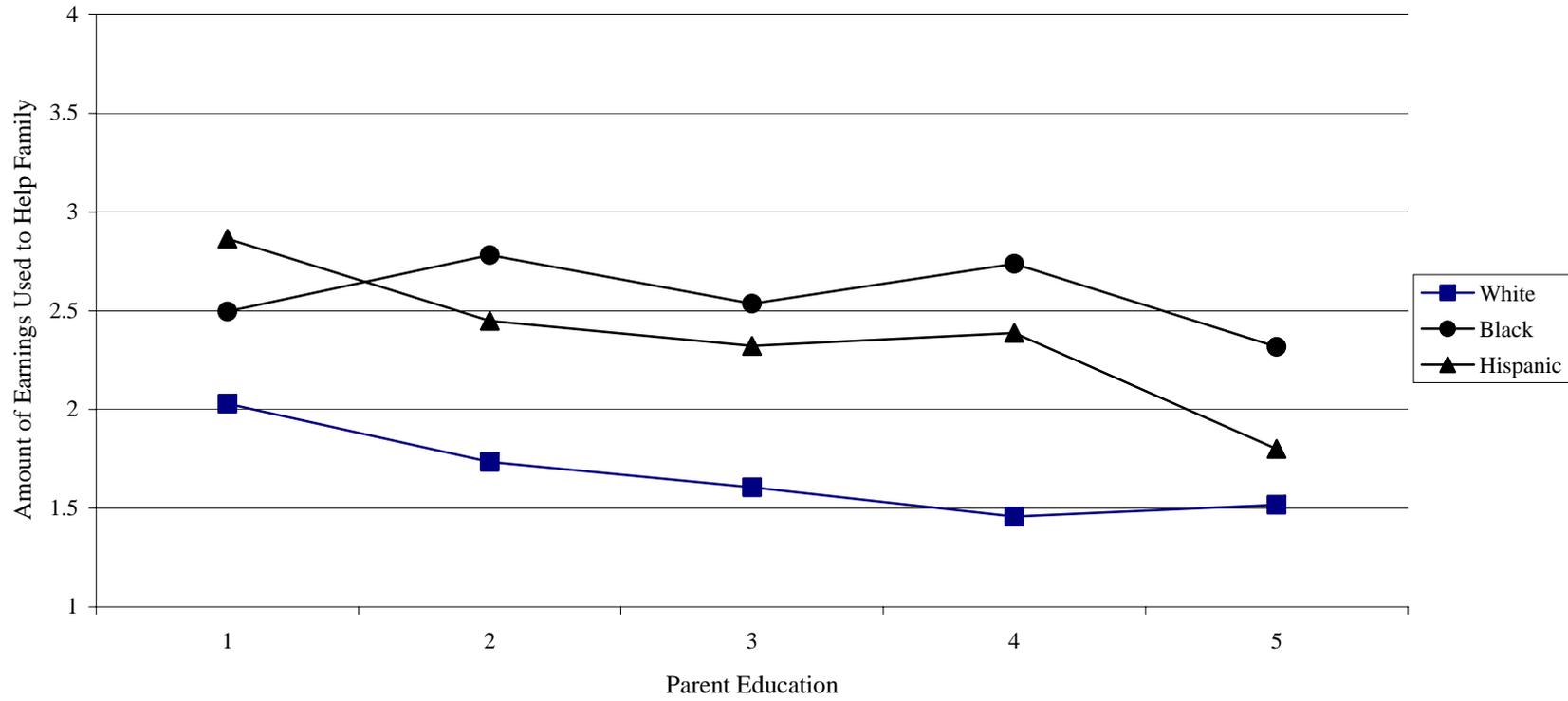
ns = non-significant at  $p < .05$

**FIGURES**

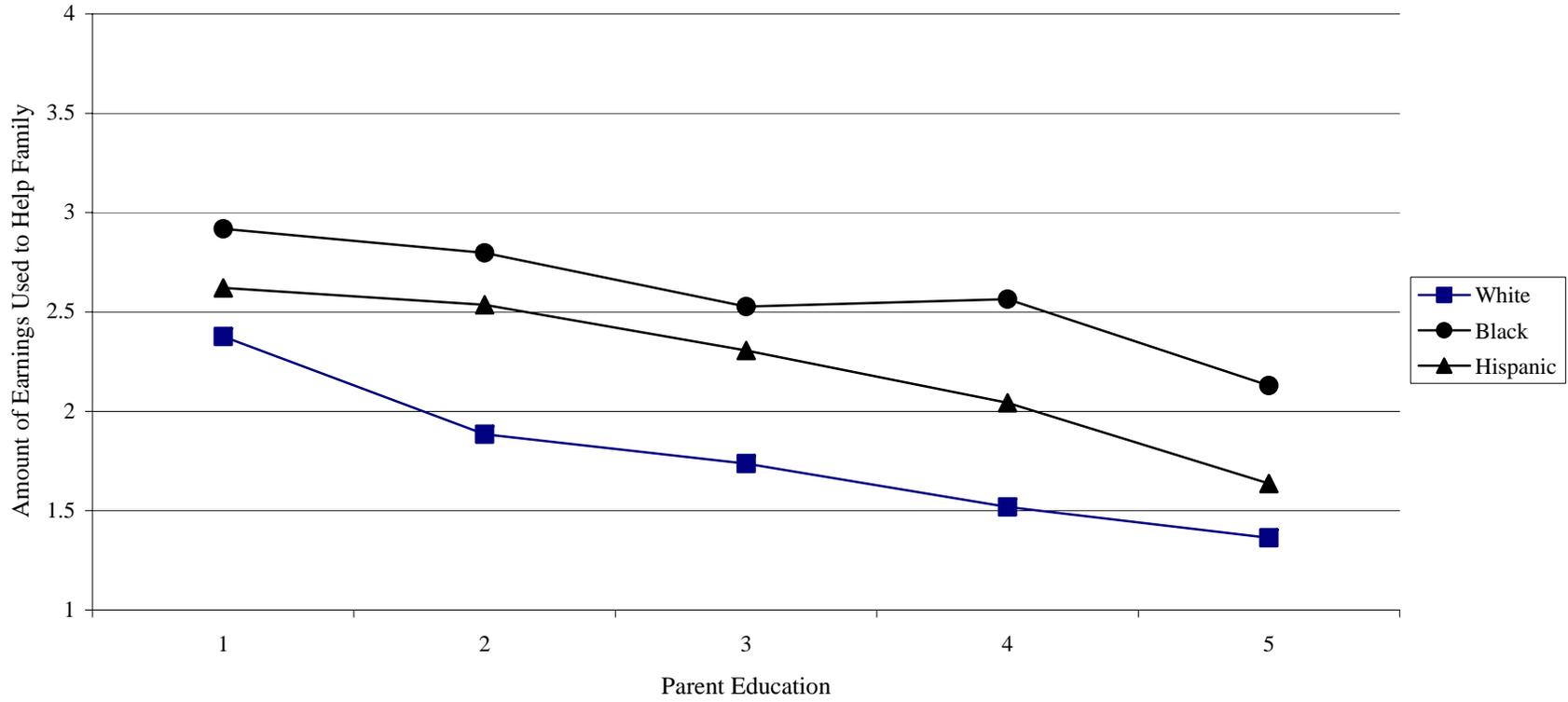
**Figure 1**  
**Mean Hours of Actual Work, Students' Preferred Work,**  
**Perceived Preferences of Parents for Student Work; by Grade and Gender**



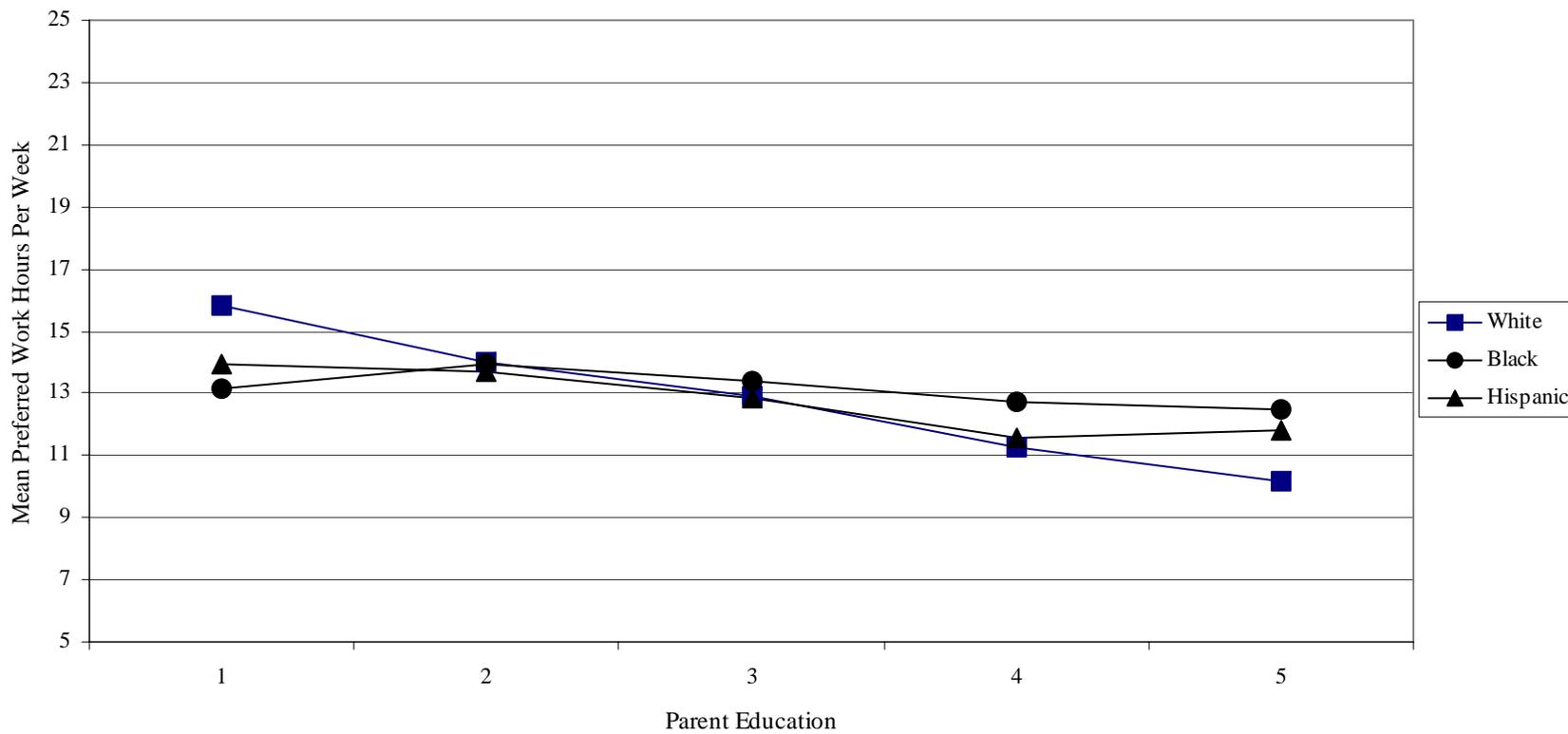
**Figure 2a**  
**How Race and Parent Education Predicts Amount of Earnings Used to Help Family:**  
**12th Grade Males**



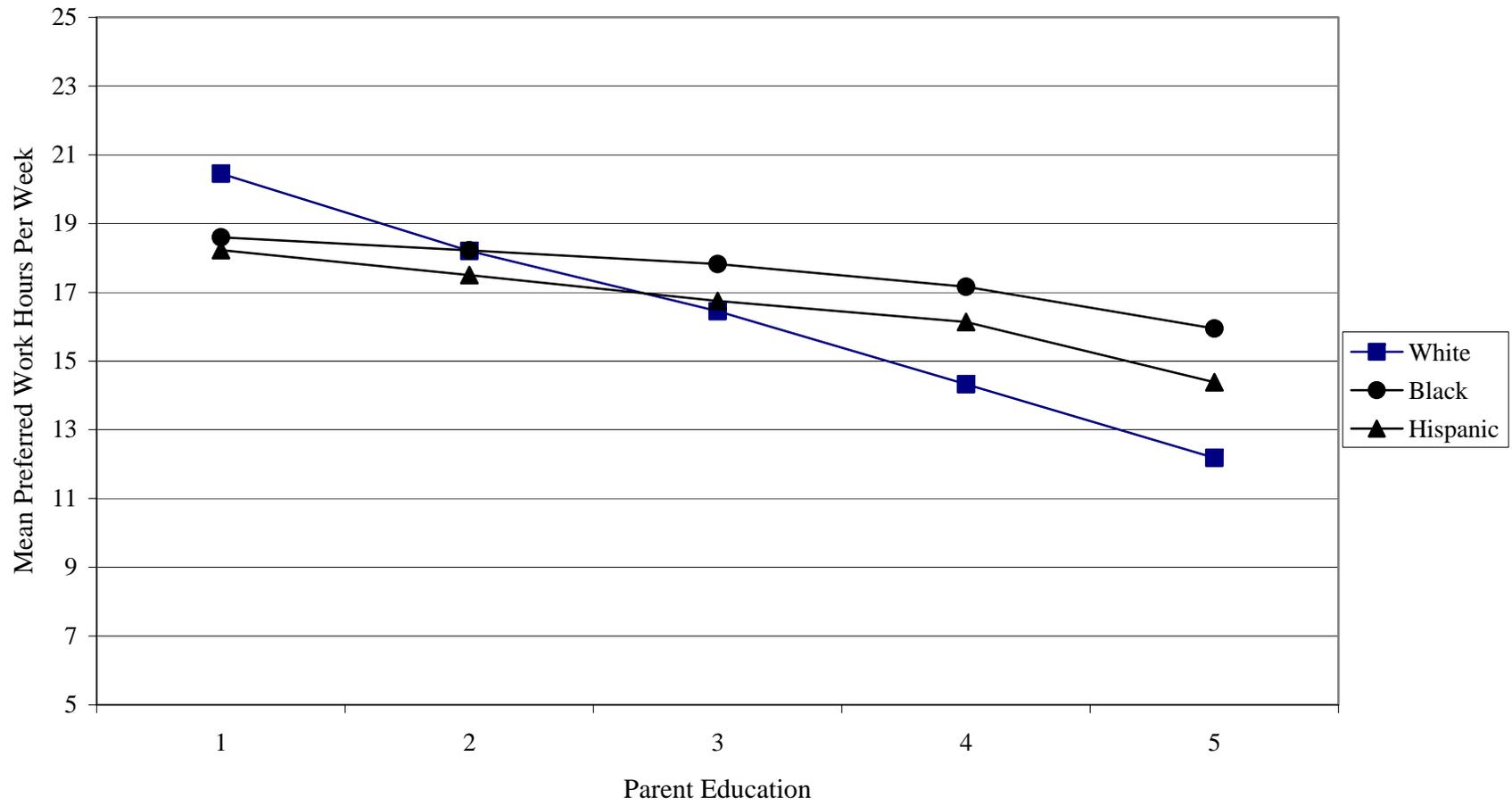
**Figure 2b**  
**How Race and Parent Education Predicts Amount of Earnings Used to Help Family:**  
**12th Grade Females**



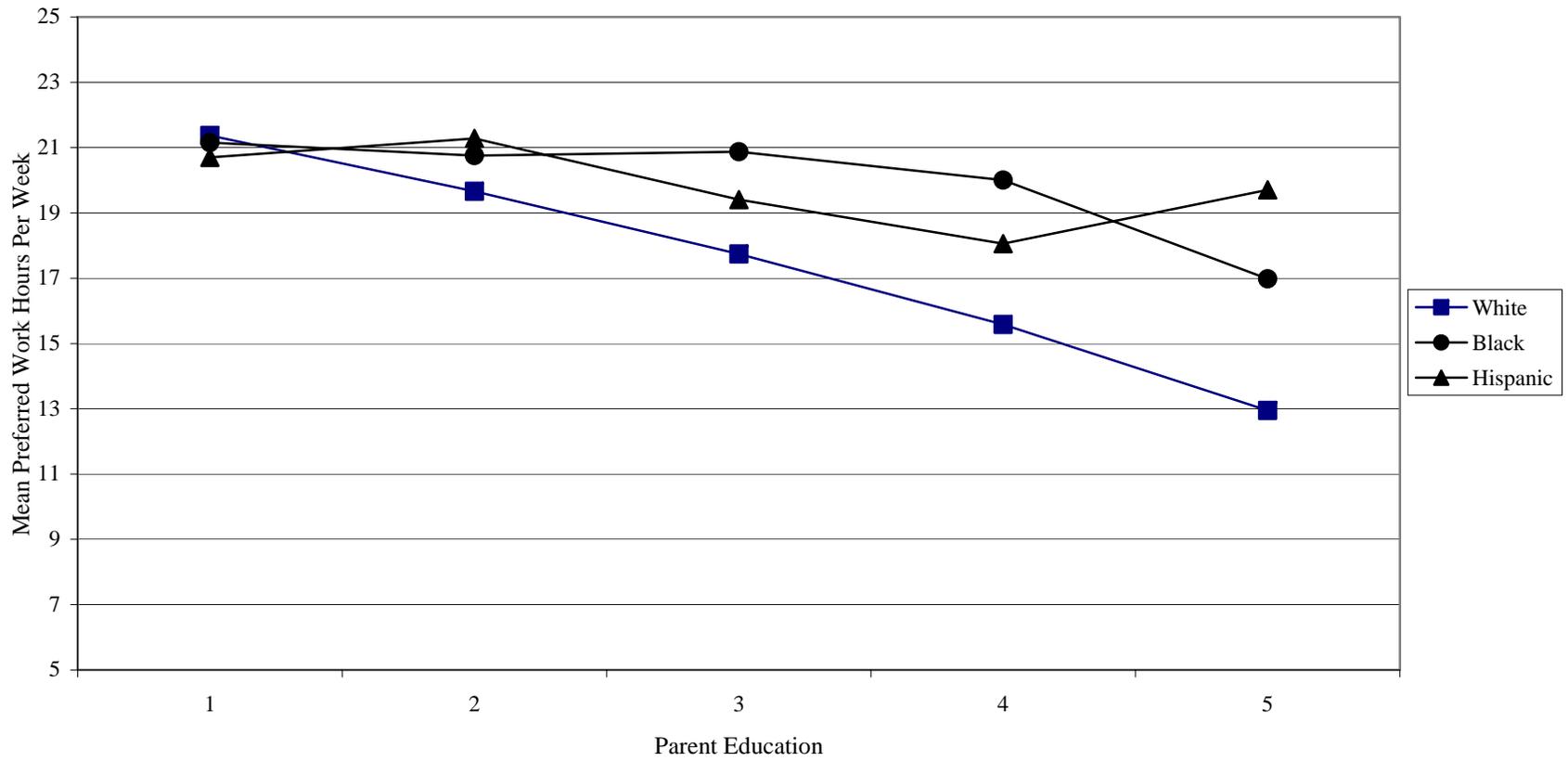
**Figure 3a**  
**How Race and Parent Education Predicts Preferred Work Hours: 8th Graders**

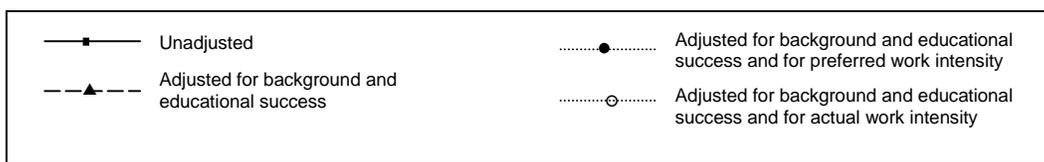
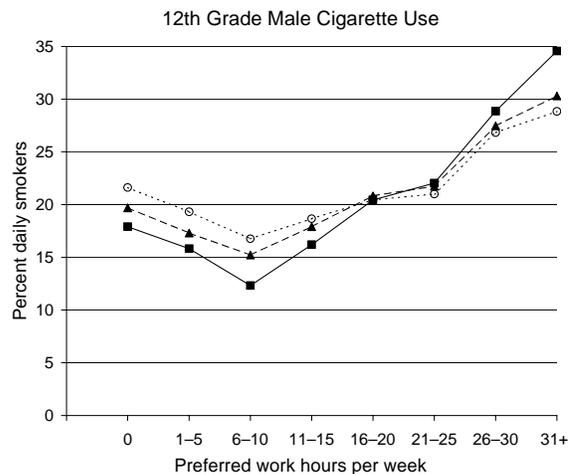
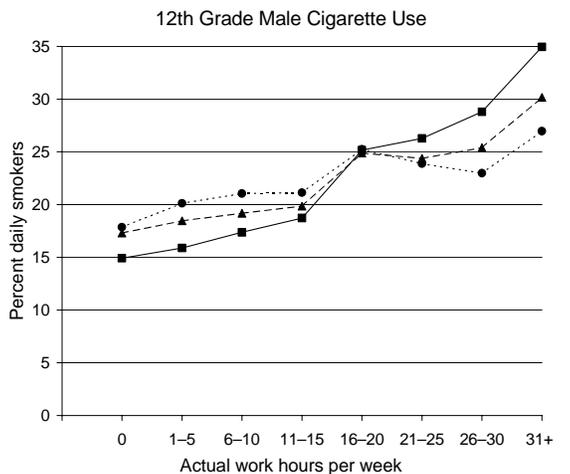
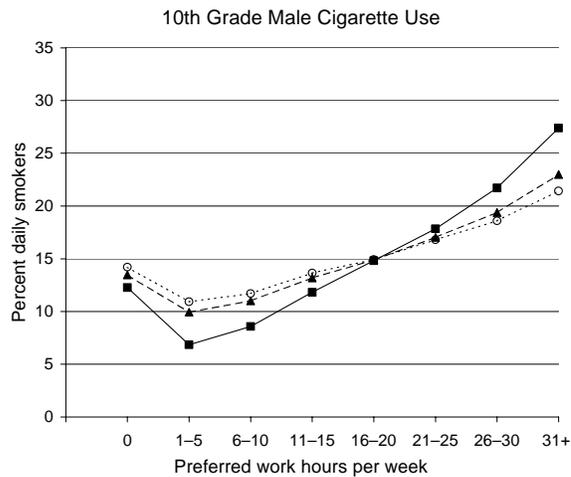
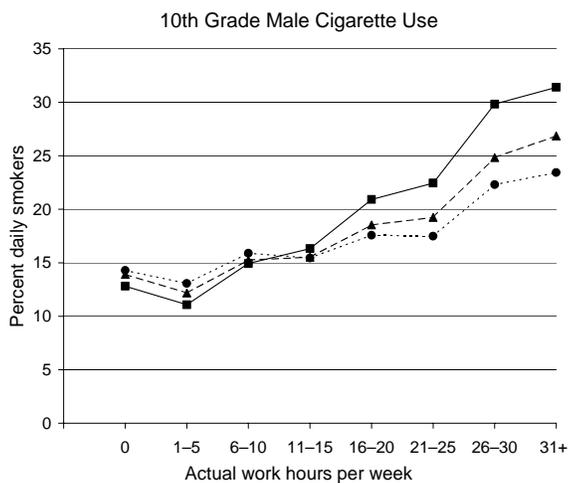
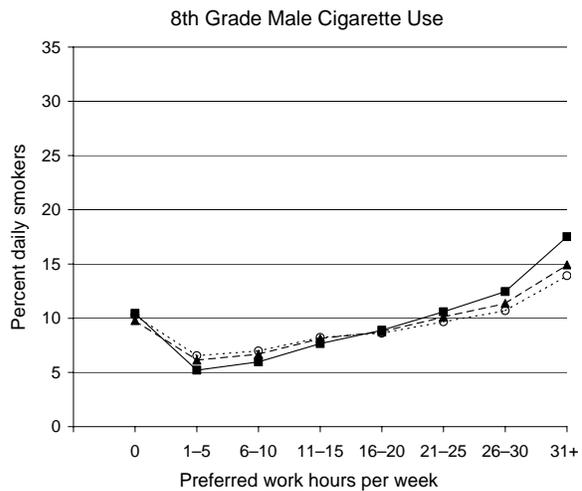
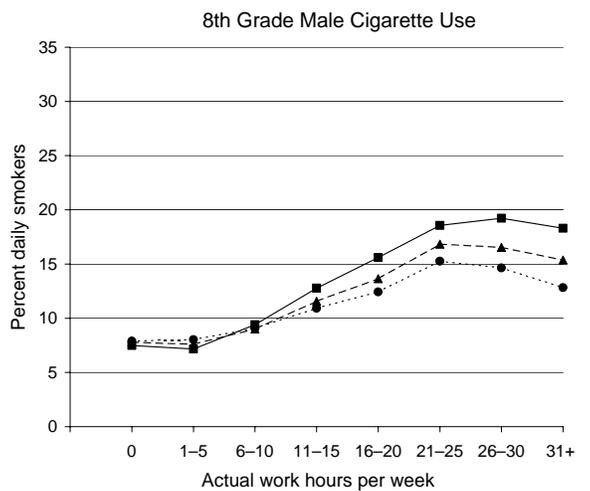


**Figure 3b**  
**How Race and Parent Education Predicts Preferred Work Hours: 10th Graders**

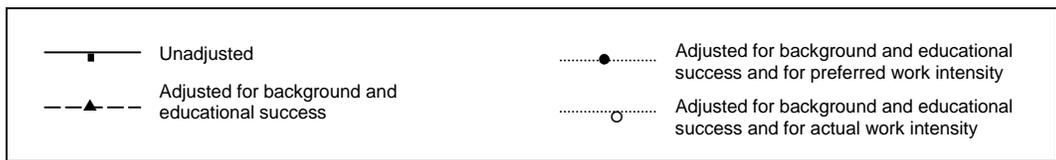
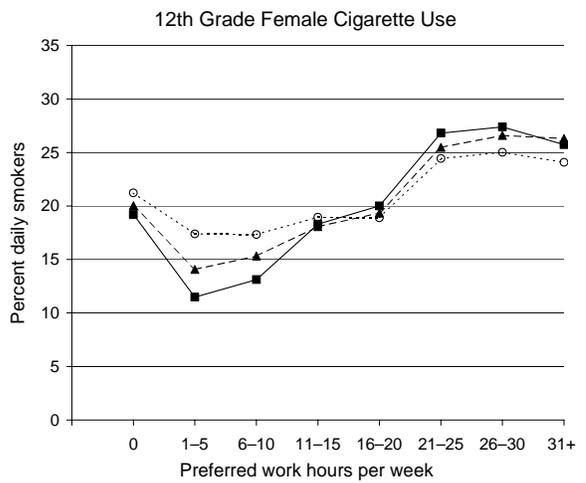
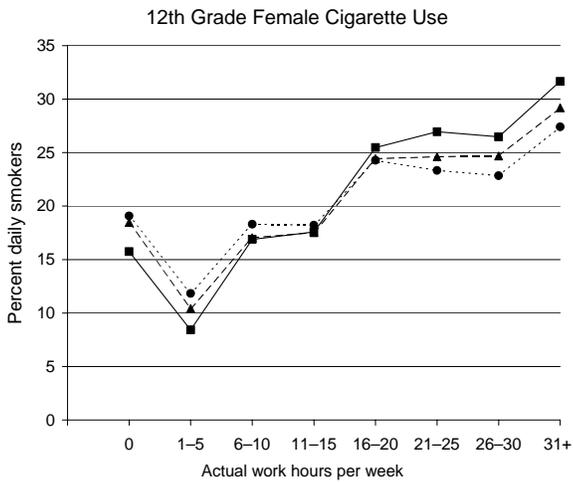
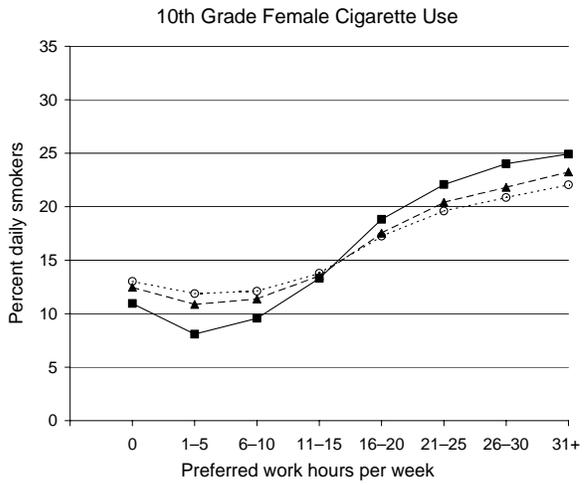
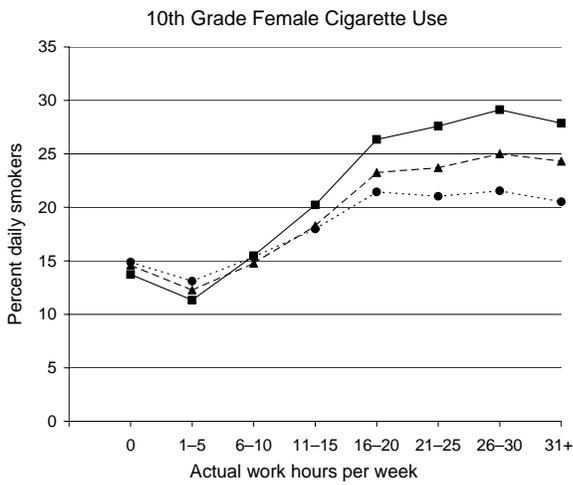
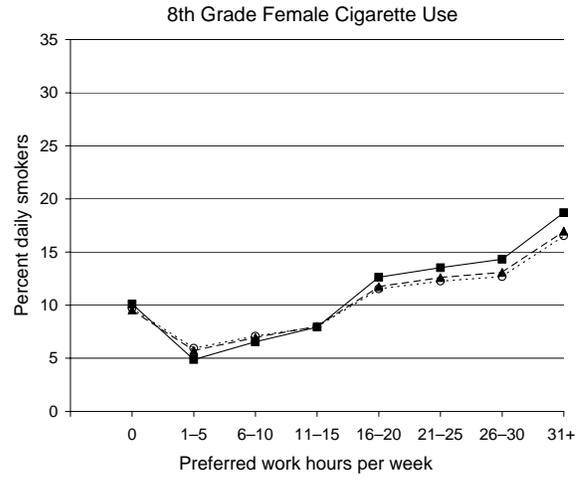
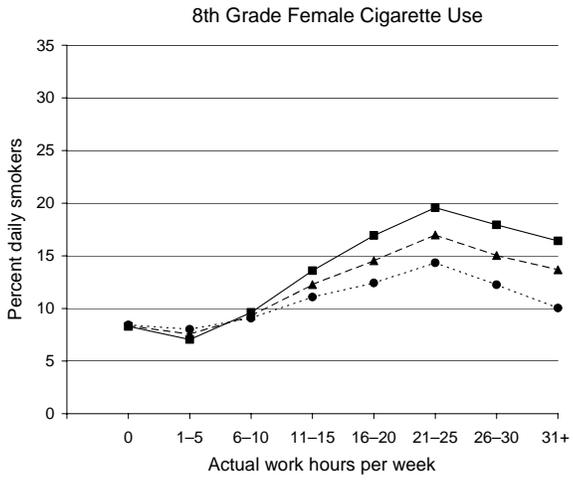


**Figure 3c**  
**How Race and Parent Education Predicts Preferred Work Hours: 12th Graders**

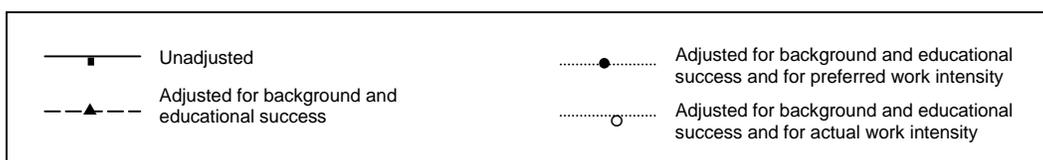
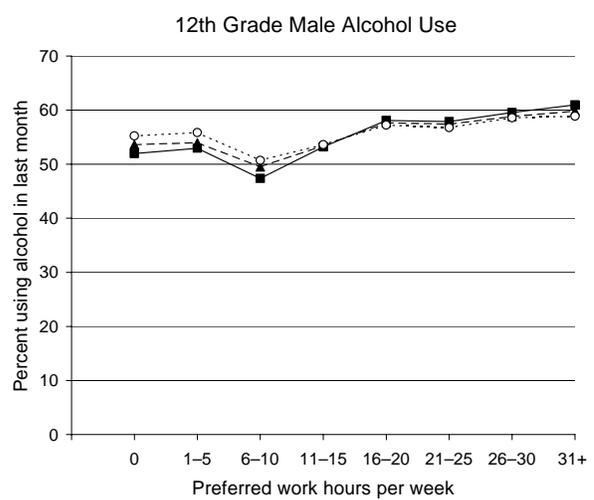
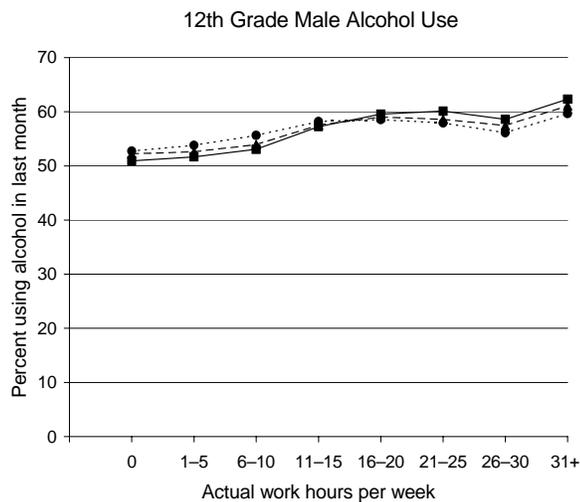
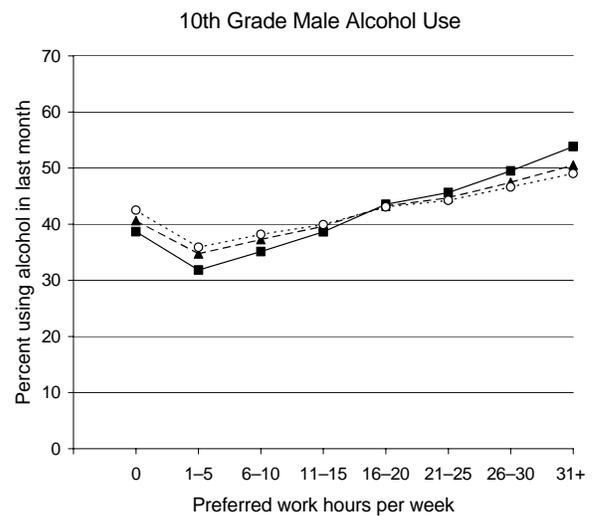
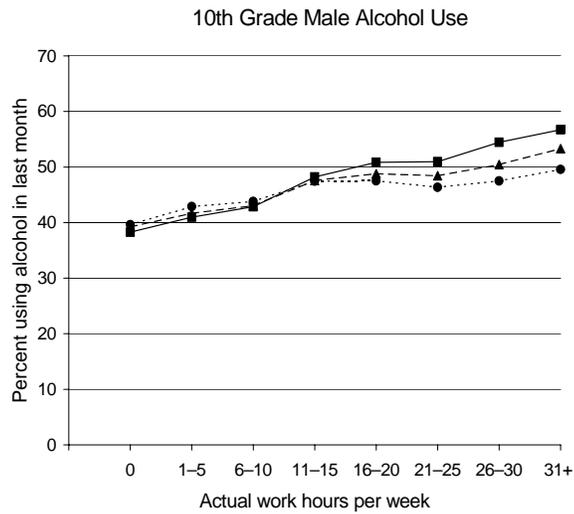
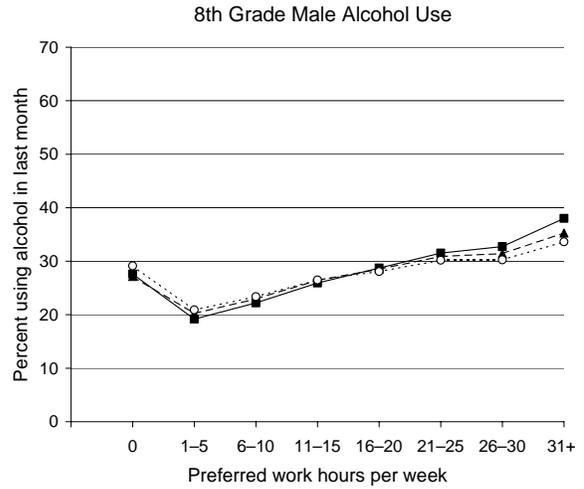
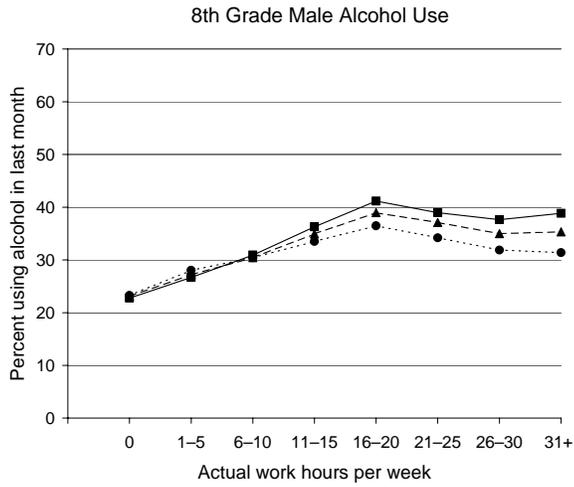




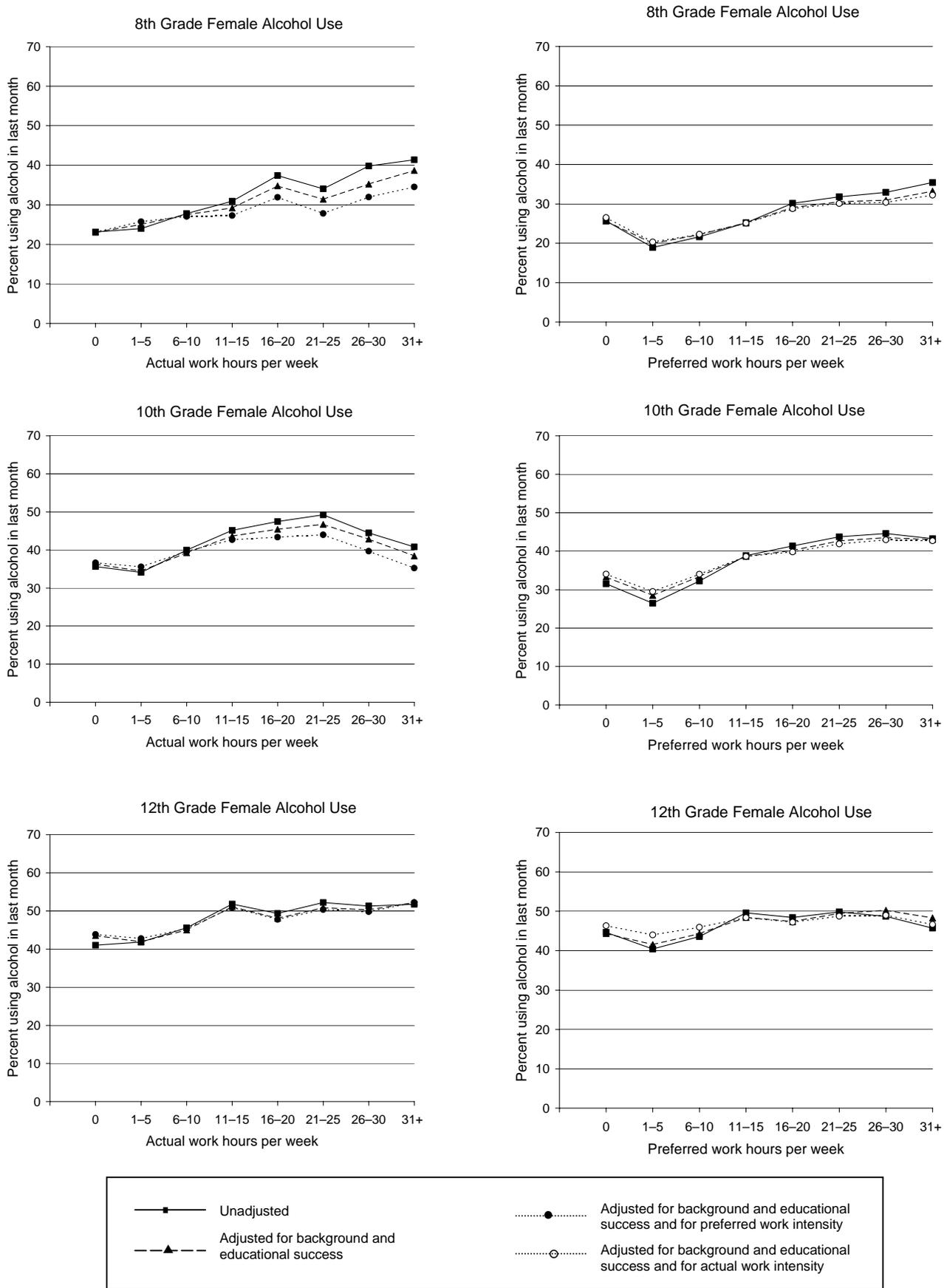
**Figure 4a.** Male cigarette use (percent smoking one or more cigarettes per day) related to actual and preferred hours of work with and without controls for background and educational success, and also controlling for preferred or actual work intensity.



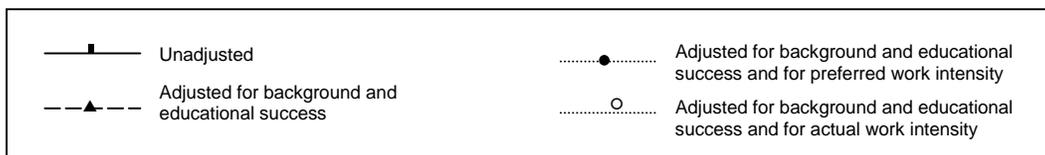
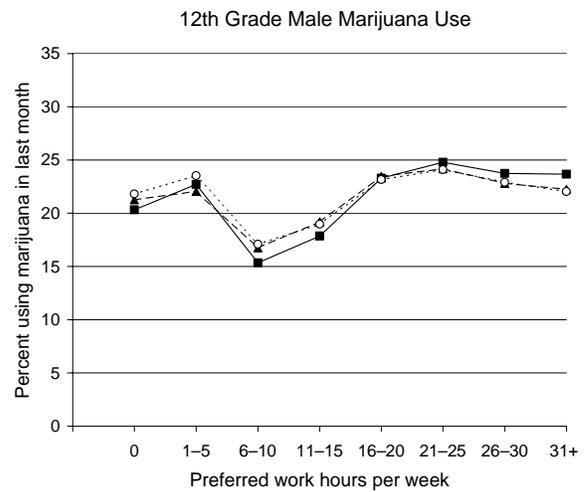
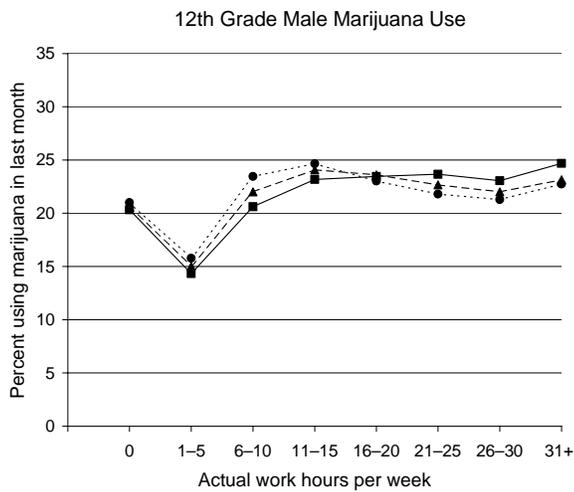
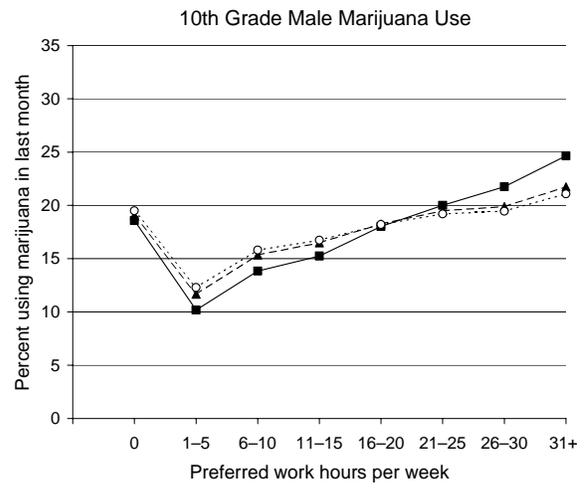
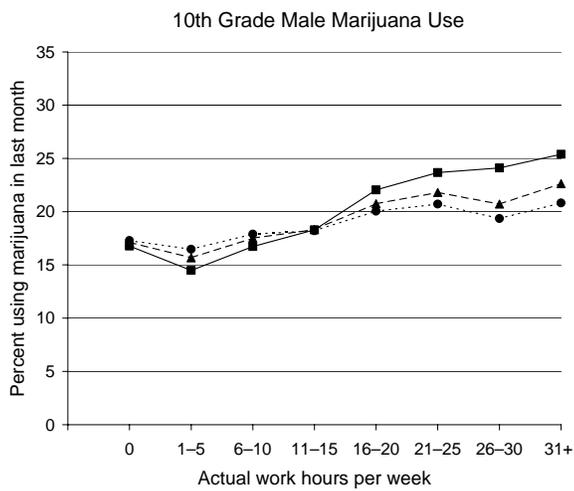
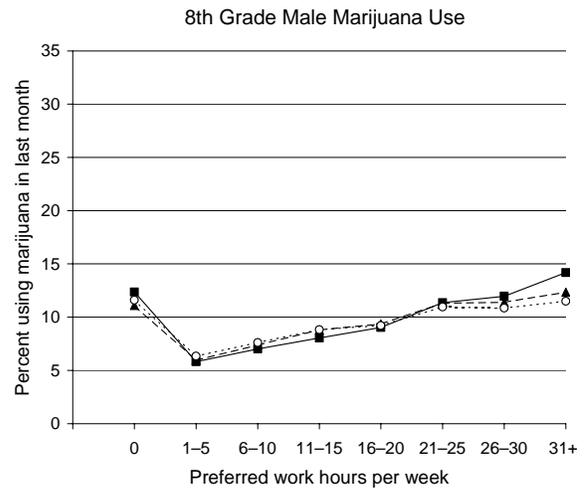
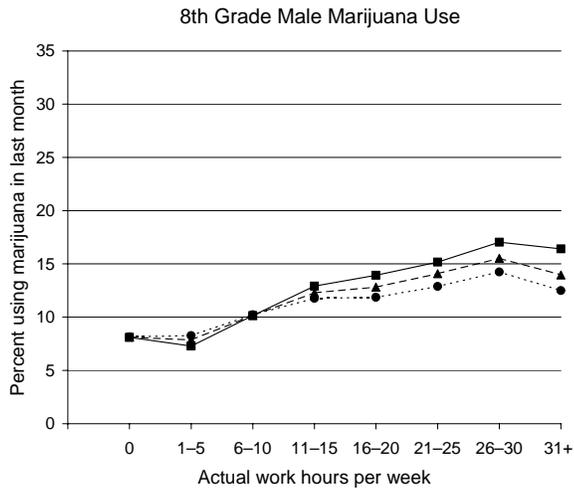
**Figure 4b.** Female cigarette use (percent smoking one or more cigarettes per day) related to actual and preferred hours of work with and without controls for background and educational success, and also controlling for preferred or actual work intensity.



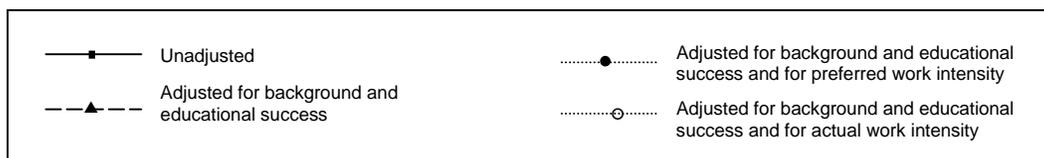
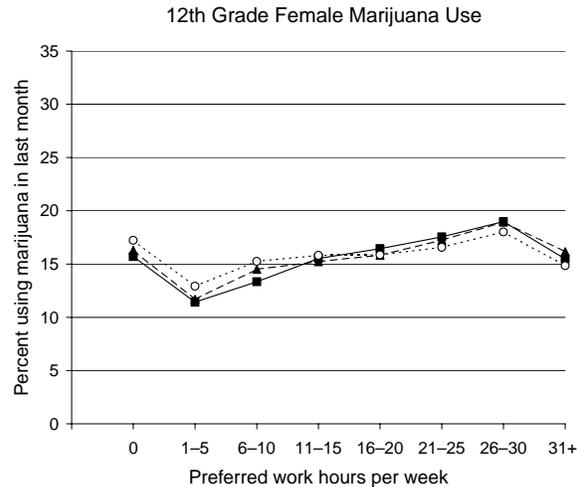
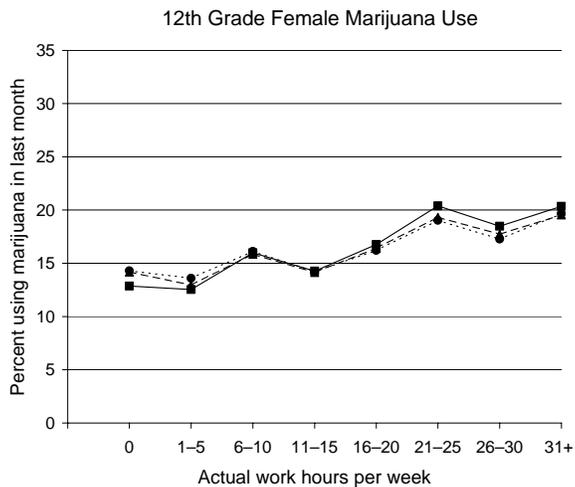
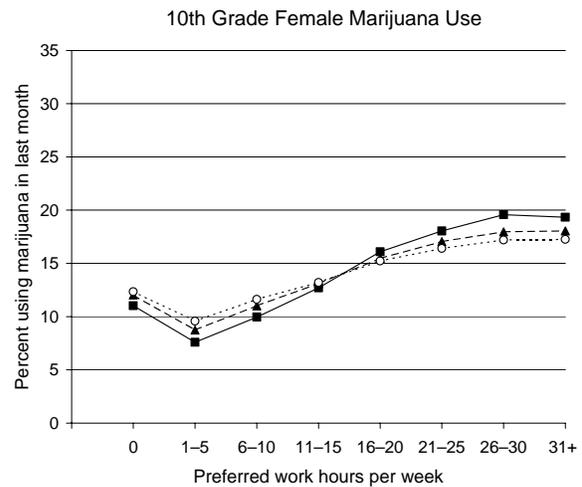
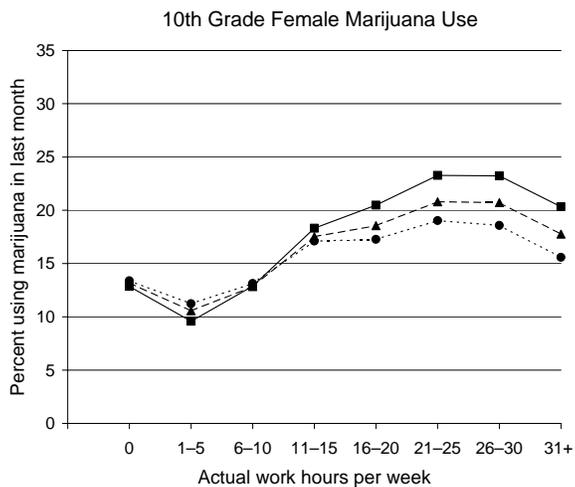
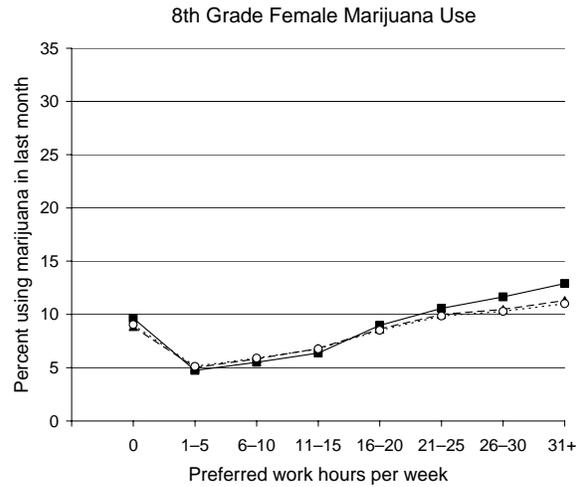
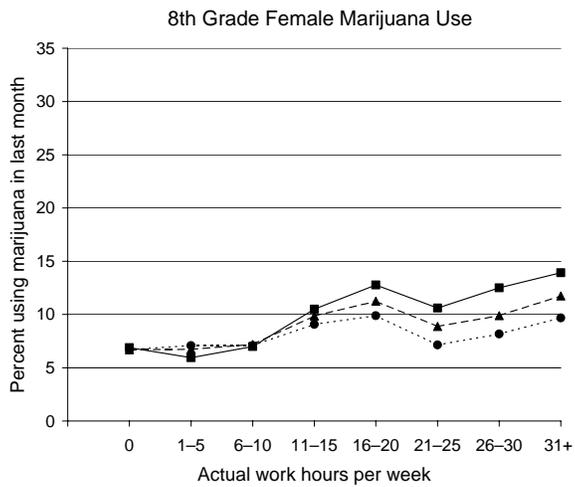
**Figure 5a.** Male alcohol use (percent having had more than just a few sips in the last month) related to actual and preferred hours of work with and without controls for background and educational success, and also controlling for preferred or actual work intensity.



**Figure 5b.** Female alcohol use (percent having had more than just a few sips in the last month) related to actual and preferred hours of work with and without controls for background and educational success, and also controlling for preferred or actual work intensity.



**Figure 6a.** Male marijuana use (percent having used at least once in past month) related to actual and preferred hours of work with and without controls for background and educational success, and also controlling for preferred or actual work intensity.



**Figure 6b.** Female marijuana use (percent having used at least once in past month) related to actual and preferred hours of work with and without controls for background and educational success, and also controlling for preferred or actual work intensity.



**APPENDICES**

Appendix A: Multiple Classification Analysis Tables .....54  
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**Table A.1. Prevalence of Monthly Cigarette Use Predicted by Actual and Preferred Hours of Work, Background, and Educational Success: Multiple Classification Analyses of 8th Graders, Males and Females in the Classes of 1992-1998**

	Males: Monthly Cigarette Use			Females Monthly Cigarette Use		
	n	x	x(adj)	n	x	x(adj)
<b>Base Year</b>						
1992	6244	1.2613	1.243	6349	1.2789	1.2472
1993	6082	1.3168	1.3062	6139	1.2836	1.2676
1994	5821	1.3788	1.3802	5903	1.3051	1.3039
1995	5669	1.334	1.3486	5901	1.3419	1.3422
1996	5777	1.3901	1.3834	6055	1.3843	1.3824
1997	6048	1.348	1.3544	6454	1.3284	1.347
1998	5956	1.3205	1.3352	6238	1.3432	1.3747
Eta		0.046			0.042	
Beta			0.053			0.06
<b>Race</b>						
Black	5450	1.1625	1.1166	6201	1.1229	1.068
White	26491	1.3688	1.3836	27440	1.3676	1.3951
Hispanic	4400	1.3514	1.3119	4375	1.3242	1.2158
Other	5255	1.3276	1.3339	5025	1.3284	1.3405
Eta		0.079			0.103	
Beta			0.102			0.145
<b>College Plans</b>						
Definitely won't	2087	2.0072	1.7868	1222	2.1517	1.8651
Probably won't	3654	1.6283	1.4928	2610	1.7849	1.5896
Probably will	12714	1.3324	1.3204	10964	1.3929	1.3469
Definitely will	23141	1.229	1.2769	28244	1.2179	1.2662
Eta		0.221			0.249	
Beta			0.139			0.15
<b>Region</b>						
South	7729	1.2962	1.311	8221	1.3077	1.3303
NE	10995	1.3577	1.327	11225	1.3506	1.3162
NC	14627	1.3854	1.3985	15296	1.3356	1.3477
West	8245	1.2503	1.2541	8299	1.2796	1.2812
Eta		0.06			0.032	
Beta			0.062			0.03
<b>Urbanicity</b>						
Farm	1979	1.3975	1.2852	1675	1.3528	1.276
Country	3762	1.4316	1.3398	3723	1.3707	1.3201
Non SMSA	5350	1.3873	1.3629	5988	1.3719	1.3419
Non S-R	20862	1.3263	1.3323	21477	1.3332	1.3334
Self-Rep	9643	1.2732	1.3325	10177	1.2518	1.3003
Eta		0.055			0.052	
Beta			0.017			0.022

Table A.1, cont

Parent Ed	Males: Monthly Cigarette Use			Females: Monthly Cigarette Use		
	n	x	x(adj)	n	x	x(adj)
Low	3208	1.5036	1.3423	4352	1.513	1.364
2	10158	1.3884	1.2948	11340	1.4042	1.3266
3	10753	1.3349	1.3348	10878	1.3267	1.3331
4	11172	1.272	1.3439	10430	1.2282	1.3028
High	6305	1.2733	1.379	6041	1.1931	1.306
Eta		0.078			0.123	
Beta			0.031			0.023
<b>Curriculum</b>						
Coll Prep	13997	1.2288	1.3319	16162	1.2053	1.3154
General	23892	1.3714	1.3299	24995	1.3855	1.3247
Vo-Tech	3707	1.4986	1.3767	1884	1.5122	1.3732
Eta		0.096			0.117	
Beta			0.015			0.014
<b>Grades</b>						
D, C-	4130	1.8806	1.77	2774	2.0388	1.9009
C, C+	8190	1.4621	1.442	6414	1.5546	1.5153
B-, B	11701	1.299	1.3098	11137	1.3387	1.3362
B+, A-	12069	1.1875	1.218	14596	1.2045	1.2305
A	5506	1.1345	1.1577	8120	1.089	1.1238
Eta		0.244			0.291	
Beta			0.198			0.238
<b>Hrs Work/Week</b>						
None	22719	1.2904	1.303	25630	1.3101	1.3126
5 or less	9420	1.2913	1.3235	10284	1.2752	1.3103
6 to 10	4330	1.3668	1.3574	4160	1.3542	1.3415
11 to 15	1871	1.5016	1.4375	1333	1.4921	1.4152
16 to 20	1451	1.5849	1.4784	754	1.6127	1.4699
21 to 25	711	1.6261	1.5151	376	1.6684	1.5023
26 to 30	365	1.7101	1.5527	201	1.5442	1.3595
31+	728	1.6894	1.5005	302	1.6208	1.4108
Eta		0.115			0.087	
Beta			0.066			0.041
<b>Hrs Prefer Wrk</b>						
None	2496	1.4385	1.4356	1755	1.4061	1.3932
5 or less	6331	1.2113	1.2567	8790	1.2063	1.2421
6 to 10	10592	1.2363	1.2724	13784	1.2548	1.2732
11 to 15	6537	1.3106	1.3318	6943	1.3034	1.3051
16 to 20	6009	1.3433	1.3344	5209	1.4303	1.3937
21 to 25	3470	1.3933	1.3612	2955	1.4844	1.4416
26 to 30	2386	1.4838	1.4211	1729	1.5	1.4441
31+	3775	1.6295	1.5003	1876	1.6584	1.5815
Eta		0.141			0.145	
Beta			0.086			0.106
R squared	0.112			0.147		

**Table A.2. Prevalence of Monthly Cigarette Use Predicted by Actual and Preferred Hours of Work, Background, and Educational Success: Multiple Classification Analyses of 10th Graders, Males and Females in the Classes of 1992-1998**

	Males: Monthly Cigarette Use			Females Monthly Cigarette Use		
	n	x	x(adj)	n	x	x(adj)
<b>Base Year</b>						
1992	5496	1.4347	1.449	5743	1.4119	1.4109
1993	5846	1.5051	1.4952	6032	1.4809	1.4569
1994	6126	1.558	1.524	6216	1.4798	1.4597
1995	6438	1.5816	1.5795	6484	1.5598	1.5527
1996	5937	1.6652	1.6493	6082	1.6338	1.6376
1997	5876	1.5978	1.6153	6102	1.6324	1.6453
1998	5627	1.544	1.5784	6150	1.5916	1.6272
Eta		0.059			0.074	
Beta			0.057			0.086
<b>Race</b>						
Black	3964	1.2211	1.1364	4799	1.1377	1.0114
White	30174	1.6207	1.6257	30715	1.6341	1.6556
Hispanic	3662	1.3952	1.3851	3871	1.329	1.2759
Other	3547	1.5572	1.6199	3424	1.531	1.5754
Eta		0.113			0.16	
Beta			0.137			0.206
<b>College Plans</b>						
Definitely won't	2816	2.3528	2.0185	1666	2.5017	2.1361
Probably won't	5041	1.9347	1.7216	3315	1.9408	1.7092
Probably will	12902	1.5406	1.5241	10833	1.6398	1.5677
Definitely will	20586	1.3659	1.4741	26994	1.3956	1.4755
Eta		0.251			0.24	
Beta			0.131			0.13
<b>Region</b>						
South	8209	1.5642	1.5946	8409	1.5749	1.5859
NE	11549	1.5866	1.543	11930	1.603	1.5471
NC	14043	1.6274	1.6364	14462	1.5756	1.6028
West	7545	1.3726	1.3896	8008	1.3594	1.3819
Eta		0.081			0.084	
Beta			0.078			0.076
<b>Urbanicity</b>						
Farm	1737	1.6578	1.5155	1510	1.5335	1.4928
Country	3976	1.6776	1.5682	4157	1.6377	1.5536
Non SMSA	5143	1.6639	1.6555	5836	1.6019	1.5921
Non S-R	21549	1.5429	1.5451	21755	1.5388	1.5321
Self-Rep	8941	1.456	1.532	9552	1.4752	1.5396
Eta		0.067			0.046	
Beta			0.035			0.021

Table A.2, cont

Parent Ed	Males: Monthly Cigarette Use			Females: Monthly Cigarette Use		
	n	x	x(adj)	n	x	x(adj)
Low	2861	1.6372	1.495	4061	1.6489	1.5347
2	10263	1.6706	1.517	11372	1.6674	1.5441
3	11809	1.5714	1.5551	12039	1.5453	1.5424
4	10828	1.4717	1.5716	10196	1.4436	1.5367
High	5585	1.442	1.6377	5140	1.373	1.5582
Eta		0.077			0.099	
Beta			0.036			0.006
<b>Curriculum</b>						
Coll Prep	20592	1.377	1.5221	23954	1.3924	1.5131
General	16270	1.6925	1.5871	16592	1.7145	1.575
Vo-Tech	4484	1.8918	1.6077	2263	1.8728	1.6186
Eta		0.168			0.164	
Beta			0.031			0.033
<b>Grades</b>						
D, C-	4459	2.2882	2.1237	2953	2.3131	2.1614
C, C+	10088	1.7478	1.707	8314	1.8492	1.8038
B-, B	12596	1.4623	1.4821	12785	1.5352	1.5342
B+, A-	9962	1.2984	1.3568	12802	1.3349	1.3763
A	4241	1.2229	1.2968	5955	1.1951	1.247
Eta		0.278			0.283	
Beta			0.216			0.233
<b>Hrs Work/Week</b>						
None	21170	1.4652	1.5152	24985	1.4767	1.5132
5 or less	5042	1.4253	1.49	5781	1.4057	1.4647
6 to 10	3721	1.5324	1.5619	3879	1.5356	1.533
11 to 15	3104	1.6048	1.5748	2631	1.7002	1.6312
16 to 20	3542	1.7305	1.6205	2784	1.8731	1.7195
21 to 25	2327	1.8252	1.6643	1484	1.9267	1.7145
26 to 30	1321	2.0242	1.7729	793	1.9731	1.7181
31+	1119	2.1777	1.9036	472	2.0126	1.763
Eta		0.157			0.149	
Beta			0.076			0.073
<b>Hrs Prefer Wrk</b>						
None	2207	1.4668	1.5324	1717	1.4031	1.4672
5 or less	2499	1.2762	1.4164	3814	1.2877	1.4073
6 to 10	6522	1.3295	1.4392	9162	1.3497	1.4309
11 to 15	6629	1.4411	1.5039	8217	1.4698	1.486
16 to 20	8387	1.5453	1.5519	8531	1.6287	1.5798
21 to 25	6167	1.6252	1.5902	5375	1.7358	1.6573
26 to 30	4104	1.7512	1.6445	3414	1.8268	1.7252
31+	4829	1.9778	1.7648	2578	1.867	1.7673
Eta		0.18			0.176	
Beta			0.089			0.107
R squared	0.149			0.177		

**Table A.3. Prevalence of Monthly Cigarette Use Predicted by Actual and Preferred Hours of Work, Background and Educational Success: Multiple Classification Analyses of 12th Graders, Males and Females in the Classes of 1992-1998**

	Males: Monthly Cigarette Use			Females: Monthly Cigarette Use		
	n	x	x(adj)	n	x	x(adj)
<b>Base Year</b>						
1992	893	1.6836	1.6597	1013	1.5889	1.5682
1993	862	1.727	1.7502	1019	1.7201	1.6873
1994	821	1.754	1.7206	1000	1.5828	1.588
1995	858	1.797	1.795	981	1.694	1.6816
1996	861	1.7423	1.7747	901	1.7064	1.7435
1997	866	1.92	1.9157	981	1.8561	1.8483
1998	841	1.9326	1.9401	913	1.6855	1.7245
Eta		0.068			0.072	
Beta			0.072			0.074
<b>Race</b>						
Black	558	1.319	1.2038	835	1.1702	1.0396
White	4614	1.8777	1.8789	5069	1.8253	1.84
Hispanic	407	1.5647	1.6023	471	1.3226	1.3339
Other	424	1.7146	1.8168	432	1.5052	1.5722
Eta		0.132			0.202	
Beta			0.153			0.234
<b>College Plans</b>						
Definitely won't	853	2.3674	2.0616	642	2.1203	1.8338
Probably won't	717	2.0383	1.8399	680	1.9904	1.7653
Probably will	1431	1.791	1.7761	1376	1.7282	1.6954
Definitely will	3002	1.5724	1.7138	4110	1.56	1.6529
Eta		0.213			0.161	
Beta			0.089			0.048
<b>Region</b>						
South	1000	1.8426	1.8341	1225	1.8134	1.7935
NE	1745	1.9177	1.8604	1957	1.7894	1.7085
NC	2135	1.8152	1.8494	2429	1.6308	1.7026
West	1124	1.5136	1.5452	1197	1.5203	1.5272
Eta		0.107			0.091	
Beta			0.091			0.069
<b>Urbanicity</b>						
Farm	244	1.8603	1.7438	201	1.744	1.7014
Country	480	1.9756	1.8281	497	1.6614	1.6423
Non SMSA	960	1.9164	1.8718	1172	1.7609	1.7405
Non S-R	2951	1.7485	1.7757	3296	1.6628	1.6616
Self-Rep	1368	1.7268	1.7719	1642	1.6952	1.7233
Eta		0.065			0.031	
Beta			0.029			0.03

Table A.3, cont

Parent Ed	Males: Monthly Cigarette Use			Females: Monthly Cigarette Use		
	n	x	x(adj)	n	x	x(adj)
Low	411	1.8936	1.8239	585	1.6068	1.5928
2	1472	1.8893	1.7084	1799	1.7572	1.6407
3	1766	1.7978	1.7598	2017	1.6669	1.6716
4	1520	1.7496	1.8494	1599	1.6881	1.7436
High	833	1.6429	1.8953	808	1.6603	1.8084
Eta		0.062			0.038	
Beta			0.05			0.052
<b>Curriculum</b>						
Coll Prep	3325	1.5781	1.7165	4267	1.5327	1.6065
General	2003	1.9854	1.8464	2111	1.9073	1.7922
Vo-Tech	675	2.2822	2.0123	430	2.1808	2.0136
Eta		0.193			0.178	
Beta			0.074			0.1
<b>Grades</b>						
D, C-	285	2.5876	2.4241	163	2.798	2.6815
C, C+	1288	2.0607	2.0214	959	2.0578	2.0226
B-, B	2102	1.8242	1.8086	2078	1.7309	1.6977
B+, A-	1677	1.5509	1.599	2513	1.5981	1.6227
A	652	1.4403	1.5159	1093	1.334	1.3887
Eta		0.209			0.225	
Beta			0.168			0.197
<b>Hrs Work/Week</b>						
None	1606	1.5497	1.6488	1670	1.5383	1.6523
5 or less	389	1.5862	1.727	450	1.3356	1.4472
6 to 10	518	1.5943	1.7171	670	1.5572	1.6095
11 to 15	588	1.7104	1.7907	885	1.5918	1.6246
16 to 20	960	1.892	1.8991	1236	1.8313	1.7939
21 to 25	814	1.9267	1.8561	943	1.8771	1.7552
26 to 30	561	2.0179	1.8248	553	1.8524	1.7159
31+	568	2.3093	2.0174	402	2.0548	1.8857
Eta		0.181			0.157	
Beta			0.088			0.085
<b>Hrs Prefer Wrk</b>						
None	520	1.6599	1.7828	401	1.6029	1.6499
5 or less	209	1.5443	1.6712	301	1.4117	1.5813
6 to 10	594	1.4701	1.6333	878	1.4488	1.5741
11 to 15	796	1.617	1.6999	1207	1.5781	1.5956
16 to 20	1326	1.7211	1.7229	1643	1.6704	1.637
21 to 25	996	1.7874	1.7554	1063	1.8689	1.7987
26 to 30	737	1.9769	1.9134	743	1.9326	1.8701
31+	825	2.3006	2.086	571	1.9113	1.8671
Eta		0.184			0.143	
Beta			0.105			0.094
R squared	0.135			0.153		

**Table A.4. Prevalence of Monthly Alcohol Use Predicted by Actual and Preferred Hours of Work, Background, and Educational Success: Multiple Classification Analyses of 8th Graders, Males and Females in the Classes of 1992-1998**

	Males: Monthly Alcohol Use			Females Monthly Alcohol Use		
	n	x	x(adj)	n	x	x(adj)
<b>Base Year</b>						
1992	5954	1.4602	1.4438	6049	1.4173	1.3955
1993	5758	1.4691	1.4594	5887	1.4025	1.3917
1994	5478	1.5192	1.5174	5623	1.4186	1.4101
1995	5322	1.4758	1.4867	5601	1.4002	1.397
1996	5415	1.5168	1.5061	5752	1.4577	1.4592
1997	5741	1.4569	1.4692	6219	1.3831	1.3994
1998	5664	1.4589	1.4753	6004	1.3655	1.3908
Eta		0.025			0.031	
Beta			0.024			0.026
<b>Race</b>						
Black	4902	1.3633	1.3349	5630	1.2982	1.2676
White	25456	1.4896	1.4961	26645	1.4086	1.4232
Hispanic	4067	1.6118	1.5961	4053	1.5606	1.497
Other	4909	1.429	1.4367	4807	1.3871	1.3958
Eta		0.062			0.073	
Beta			0.066			0.069
<b>College Plans</b>						
Definitely won't	1875	2.0492	1.8557	1123	2.0281	1.8221
Probably won't	3445	1.7389	1.6276	2420	1.7679	1.6269
Probably will	11984	1.4753	1.471	10452	1.4739	1.4387
Definitely will	22029	1.3917	1.428	27141	1.3218	1.3564
Eta		0.16			0.178	
Beta			0.1			0.112
<b>Region</b>						
South	7325	1.4471	1.4703	7883	1.3798	1.3997
NE	10428	1.4764	1.4518	10813	1.4056	1.3895
NC	13764	1.5266	1.5343	14488	1.4207	1.4309
West	7816	1.4283	1.4258	7952	1.4056	1.389
Eta		0.039			0.017	
Beta			0.043			0.022
<b>Urbanicity</b>						
Farm	1846	1.5597	1.467	1621	1.3871	1.3436
Country	3541	1.5455	1.4826	3582	1.4049	1.3949
Non SMSA	5013	1.5177	1.5059	5665	1.4172	1.4057
Non S-R	19826	1.4695	1.4722	20540	1.4277	1.4247
Self-Rep	9108	1.436	1.4798	9727	1.3571	1.381
Eta		0.037			0.033	
Beta			0.011			0.025

Table A.4, cont

<b>Parent Ed</b>	<b>Males: Monthly Alcohol Use</b>			<b>Females: Monthly Alcohol Use</b>		
	<b>n</b>	<b>x</b>	<b>x(adj)</b>	<b>n</b>	<b>x</b>	<b>x(adj)</b>
Low	2914	1.608	1.4179	4043	1.5623	1.3873
2	9544	1.5174	1.4255	10733	1.4324	1.3658
3	10154	1.4778	1.4763	10401	1.433	1.439
4	10650	1.4165	1.4906	10069	1.3451	1.4183
High	6072	1.468	1.5761	5889	1.3069	1.4127
Eta		0.051			0.082	
Beta			0.049			0.032
<b>Curriculum</b>						
Coll Prep	13404	1.4115	1.5071	15719	1.3236	1.415
General	22497	1.4973	1.4606	23643	1.4502	1.3988
Vo-Tech	3432	1.6227	1.4894	1774	1.547	1.4222
Eta		0.059			0.078	
Beta			0.022			0.01
<b>Grades</b>						
D, C-	3865	1.9271	1.8323	2562	1.9241	1.8136
C, C+	7551	1.6041	1.5865	5935	1.5996	1.5649
B-, B	11060	1.4717	1.48	10596	1.4446	1.4405
B+, A-	11529	1.3507	1.3765	14059	1.3232	1.3417
A	5328	1.269	1.2899	7984	1.1903	1.2245
Eta		0.182			0.212	
Beta			0.149			0.171
<b>Hrs Work/Week</b>						
None	21546	1.3882	1.3992	24375	1.3794	1.3765
5 or less	8967	1.4607	1.4976	9915	1.3798	1.4203
6 to 10	4056	1.5741	1.5678	4031	1.4625	1.4557
11 to 15	1734	1.7504	1.685	1268	1.5734	1.5068
16 to 20	1368	1.8888	1.7756	720	1.6724	1.5554
21 to 25	665	1.8094	1.6919	357	1.6829	1.5408
26 to 30	324	1.9496	1.7921	195	1.677	1.5038
31+	675	1.968	1.7543	274	1.8528	1.6717
Eta		0.149			0.084	
Beta			0.11			0.054
<b>Hrs Prefer Wrk</b>						
None	2351	1.5509	1.5838	1684	1.4965	1.5038
5 or less	5953	1.3152	1.3624	8394	1.2932	1.3221
6 to 10	10020	1.3722	1.4071	13260	1.3368	1.3523
11 to 15	6260	1.4433	1.4661	6635	1.4028	1.4059
16 to 20	5684	1.5163	1.5041	4987	1.5008	1.4745
21 to 25	3311	1.5607	1.523	2790	1.583	1.5462
26 to 30	2239	1.6283	1.5545	1619	1.5495	1.4903
31+	3515	1.8436	1.7039	1768	1.7073	1.6219
Eta		0.146			0.128	
Beta			0.095			0.096
R squared	0.077			0.077		

**Table A.5. Prevalence of Monthly Alcohol Use Predicted by Actual and Preferred Hours of Work, Background, and Educational Success: Multiple Classification Analyses of 10th Graders, Males and Females in the Classes of 1992-1998**

	Males: Monthly Alcohol Use			Females Monthly Alcohol Use		
	n	x	x(adj)	n	x	x(adj)
<b>Base Year</b>						
1992	5337	1.8031	1.8199	5578	1.6652	1.6636
1993	5647	1.8666	1.8621	5893	1.6606	1.6458
1994	5975	1.8979	1.8778	6056	1.6162	1.6049
1995	6281	1.84	1.8425	6324	1.68	1.6768
1996	5724	1.8915	1.8686	5930	1.6877	1.6854
1997	5706	1.896	1.9067	5953	1.676	1.6824
1998	5474	1.8481	1.8682	5971	1.7007	1.7278
Eta		0.025			0.024	
Beta			0.019			0.033
<b>Race</b>						
Black	3679	1.5905	1.515	4534	1.3774	1.3126
White	29578	1.9001	1.905	30143	1.7259	1.7366
Hispanic	3488	1.9388	1.9248	3713	1.6744	1.6467
Other	3401	1.7673	1.821	3313	1.5514	1.5733
Eta		0.073			0.105	
Beta			0.087			0.125
<b>College Plans</b>						
Definitely won't	2711	2.4402	2.1591	1609	2.1989	1.9827
Probably won't	4868	2.1709	1.9743	3166	1.8568	1.7108
Probably will	12518	1.8498	1.826	10517	1.7247	1.666
Definitely will	20049	1.7201	1.8208	26411	1.5929	1.6469
Eta		0.162			0.125	
Beta			0.072			0.061
<b>Region</b>						
South	8023	1.8487	1.8845	8187	1.6788	1.6795
NE	11274	1.8182	1.7871	11699	1.6788	1.6438
NC	13541	1.94	1.9444	14027	1.6698	1.701
West	7308	1.8097	1.8103	7790	1.6454	1.641
Eta		0.043			0.011	
Beta			0.051			0.025
<b>Urbanicity</b>						
Farm	1684	2.066	1.9737	1482	1.6386	1.6464
Country	3841	1.964	1.8988	4020	1.6989	1.6868
Non SMSA	4968	2.0047	1.9956	5659	1.7698	1.7711
Non S-R	20960	1.8325	1.8307	21264	1.658	1.6464
Self-Rep	8693	1.7755	1.8318	9279	1.627	1.6568
Eta		0.066			0.041	
Beta			0.046			0.039

Table A.5, cont

Parent Ed	Males: Monthly Alcohol Use			Females: Monthly Alcohol Use		
	n	x	x(adj)	n	x	x(adj)
Low	2727	1.9575	1.7549	3876	1.7044	1.5822
2	9910	1.9289	1.7932	11001	1.6957	1.6185
3	11477	1.885	1.8684	11776	1.6812	1.6766
4	10563	1.789	1.8858	10004	1.6279	1.6939
High	5468	1.7996	1.9941	5046	1.6408	1.7829
Eta		0.047			0.027	
Beta			0.051			0.052
<b>Curriculum</b>						
Coll Prep	20138	1.7215	1.8498	23547	1.5886	1.6675
General	15693	1.9785	1.8798	16001	1.783	1.6859
Vo-Tech	4315	2.1111	1.8713	2155	1.7119	1.5703
Eta		0.114			0.087	
Beta			0.011			0.023
<b>Grades</b>						
D, C-	4300	2.4278	2.3161	2812	2.2009	2.1622
C, C+	9713	2.0467	2.0208	8015	1.8885	1.8904
B-, B	12228	1.8509	1.8629	12440	1.6934	1.6959
B+, A-	9713	1.6163	1.6554	12539	1.5313	1.5385
A	4191	1.4729	1.5219	5896	1.3621	1.3572
Eta		0.208			0.203	
Beta			0.173			0.198
<b>Hrs Work/Week</b>						
None	20541	1.7505	1.7846	24331	1.6235	1.643
5 or less	4916	1.7787	1.8362	5627	1.5836	1.6215
6 to 10	3620	1.8317	1.8629	3785	1.6922	1.6902
11 to 15	3032	1.9736	1.97	2580	1.8002	1.7569
16 to 20	3442	2.0767	1.9985	2727	1.8685	1.7811
21 to 25	2257	2.1262	2.0026	1445	1.928	1.8098
26 to 30	1255	2.2809	2.0676	754	1.9372	1.8143
31+	1082	2.4948	2.2457	456	1.8071	1.6586
Eta		0.138			0.092	
Beta			0.084			0.052
<b>Hrs Prefer Wrk</b>						
None	2127	1.8624	1.9583	1675	1.6124	1.6667
5 or less	2401	1.6077	1.725	3696	1.4342	1.5066
6 to 10	6337	1.6477	1.7483	8898	1.5501	1.5965
11 to 15	6453	1.7321	1.7877	8068	1.6546	1.6586
16 to 20	8174	1.8408	1.8433	8340	1.7405	1.7063
21 to 25	6006	1.9114	1.8732	5229	1.7915	1.7471
26 to 30	3986	2.0668	1.9676	3322	1.8119	1.7579
31+	4662	2.2783	2.09	2476	1.8493	1.8061
Eta		0.151			0.112	
Beta			0.083			0.074
R squared	0.081			0.075		

**Table A.6. Prevalence of Monthly Alcohol Use Predicted by Actual and Preferred Hours of Work, Background, and Educational Success: Multiple Classification Analyses of 12th Graders, Males and Females in the Classes of 1992-1998**

	Males: Monthly Alcohol Use			Females: Monthly Alcohol Use		
	n	x	x(adj)	n	x	x(adj)
<b>Base Year</b>						
1992	871	2.2153	2.2019	981	1.8543	1.8555
1993	838	2.1556	2.1762	986	1.9278	1.9114
1994	801	2.2231	2.2064	980	1.7581	1.7474
1995	835	2.305	2.3069	953	1.8987	1.8865
1996	833	2.2765	2.2724	861	1.905	1.9298
1997	825	2.2504	2.2403	950	1.9711	1.9698
1998	813	2.328	2.3501	895	1.9414	1.9605
Eta		0.036			0.054	
Beta			0.039			0.059
<b>Race</b>						
Black	525	1.9656	1.9022	766	1.4661	1.411
White	4504	2.3069	2.2965	4980	1.9972	1.9954
Hispanic	382	2.3633	2.4808	453	1.6812	1.7821
Other	406	1.8819	1.9693	408	1.6525	1.6655
Eta		0.095			0.157	
Beta			0.099			0.163
<b>College Plans</b>						
Definitely won't	808	2.5296	2.3458	603	2.0178	1.9117
Probably won't	682	2.3738	2.2232	660	1.8823	1.7856
Probably will	1391	2.2073	2.1852	1324	1.9104	1.9049
Definitely will	2936	2.1649	2.2609	4020	1.8697	1.9033
Eta		0.087			0.035	
Beta			0.033			0.03
<b>Region</b>						
South	980	2.2897	2.3106	1193	2.037	1.9954
NE	1699	2.3515	2.3202	1913	1.9277	1.8774
NC	2059	2.2793	2.2909	2335	1.8417	1.9126
West	1079	1.9991	2.007	1167	1.7893	1.7727
Eta		0.083			0.069	
Beta			0.078			0.056
<b>Urbanicity</b>						
Farm	239	2.3932	2.3272	199	1.8852	1.8834
Country	472	2.3677	2.3206	484	1.6658	1.7082
Non SMSA	929	2.3359	2.311	1144	1.9055	1.9247
Non S-R	2859	2.2125	2.2192	3189	1.8983	1.8869
Self-Rep	1318	2.2034	2.2353	1592	1.9421	1.9384
Eta		0.044			0.055	
Beta			0.028			0.047

Table A.6, cont

Parent Ed	Males: Monthly Alcohol Use			Females: Monthly Alcohol Use		
	n	x	x(adj)	n	x	x(adj)
Low	389	2.2056	2.1111	546	1.6711	1.6899
2	1413	2.3163	2.2015	1733	1.816	1.7712
3	1717	2.2487	2.2164	1958	1.9234	1.928
4	1478	2.1986	2.2679	1572	1.9074	1.9142
High	820	2.2533	2.4386	799	2.1055	2.1652
Eta		0.029			0.088	
Beta			0.057			0.107
<b>Curriculum</b>						
Coll Prep	3268	2.1262	2.1995	4183	1.8341	1.8574
General	1910	2.4355	2.3582	2021	2.0112	1.9614
Vo-Tech	639	2.33	2.1862	404	1.9056	1.9136
Eta		0.096			0.067	
Beta			0.051			0.039
<b>Grades</b>						
D, C-	273	2.8139	2.7631	157	2.4677	2.5292
C, C+	1226	2.4705	2.481	894	2.1114	2.1576
B-, B	2046	2.2652	2.2543	2016	1.9575	1.9691
B+, A-	1640	2.0881	2.0965	2464	1.8473	1.8333
A	632	1.9518	1.9664	1076	1.6091	1.572
Eta		0.138			0.142	
Beta			0.132			0.163
<b>Hrs Work/Week</b>						
None	1558	2.09	2.1482	1616	1.7631	1.8174
5 or less	368	2.1584	2.2347	437	1.7157	1.7353
6 to 10	507	2.1216	2.2052	648	1.8224	1.8165
11 to 15	582	2.2457	2.2712	868	1.9463	1.9386
16 to 20	929	2.2517	2.2255	1206	1.9562	1.9337
21 to 25	791	2.3955	2.3444	914	2.0295	1.99
26 to 30	538	2.3459	2.2641	526	1.9765	1.9435
31+	544	2.587	2.4635	393	1.9938	1.9804
Eta		0.102			0.089	
Beta			0.062			0.065
<b>Hrs Prefer Wrk</b>						
None	505	2.1453	2.2302	391	1.9967	2.0304
5 or less	188	2.0194	2.0916	292	1.7382	1.8332
6 to 10	574	1.9769	2.095	851	1.7932	1.8592
11 to 15	785	2.1685	2.2028	1191	1.8928	1.8801
16 to 20	1294	2.2818	2.2869	1587	1.8868	1.8557
21 to 25	969	2.2783	2.2531	1035	1.9512	1.9139
26 to 30	714	2.3223	2.2798	717	1.9318	1.9218
31+	788	2.5011	2.3702	545	1.9098	1.9339
Eta		0.096			0.05	
Beta			0.051			0.038
R squared	0.053			0.076		

**Table A.7. Prevalence of Heavy Alcohol Use Predicted by Actual and Preferred Hours of Work, Background, and Educational Success: Multiple Classification Analyses of 8th Graders, Males and Females in the Classes of 1992-1998**

	Males: 2 Wks Heavy Alcohol Use			Females: 2 Wks Heavy Alcohol Use		
	n	x	x(adj)	n	x	x(adj)
<b>Base Year</b>						
1992	6042	1.2935	1.2822	6119	1.2465	1.2299
1993	5830	1.3054	1.3017	5948	1.2274	1.2233
1994	5556	1.3761	1.3736	5658	1.2338	1.2277
1995	5372	1.3356	1.3434	5681	1.257	1.2543
1996	5450	1.3557	1.3418	5802	1.2939	1.2906
1997	5793	1.3123	1.3242	6277	1.2531	1.2659
1998	5715	1.322	1.3343	6058	1.2367	1.2556
Eta		0.03			0.027	
Beta			0.031			0.03
<b>Race</b>						
Black	4969	1.2484	1.2195	5736	1.1889	1.163
White	25698	1.3194	1.3291	26859	1.2335	1.249
Hispanic	4112	1.5055	1.4745	4109	1.4219	1.3529
Other	4981	1.3041	1.3086	4839	1.2651	1.2684
Eta		0.071			0.081	
Beta			0.067			0.062
<b>College Plans</b>						
Definitely won't	1880	1.9266	1.7077	1136	1.8608	1.6621
Probably won't	3469	1.5871	1.4582	2440	1.5689	1.4333
Probably will	12125	1.3161	1.3064	10559	1.2956	1.2601
Definitely will	22285	1.2434	1.2872	27409	1.1782	1.2122
Eta		0.18			0.19	
Beta			0.106			0.117
<b>Region</b>						
South	7418	1.262	1.294	7954	1.2088	1.2335
NE	10540	1.3233	1.3081	10901	1.2355	1.2292
NC	13881	1.3794	1.3773	14655	1.2686	1.2684
West	7921	1.3053	1.2994	8035	1.2748	1.2591
Eta		0.047			0.033	
Beta			0.04			0.023
<b>Urbanicity</b>						
Farm	1867	1.4282	1.3391	1635	1.267	1.2341
Country	3568	1.419	1.3595	3611	1.2693	1.2665
Non SMSA	5057	1.3899	1.3764	5706	1.2795	1.2697
Non S-R	20059	1.3145	1.3188	20747	1.2548	1.2533
Self-Rep	9208	1.2673	1.3065	9844	1.2115	1.2267
Eta		0.057			0.031	
Beta			0.026			0.02

Table A.7, cont

	<b>Males: 2 Wks Heavy Alcohol Use</b>			<b>Females: 2 Wks Heavy Alcohol Use</b>		
<b>Parent Ed</b>	<b>n</b>	<b>x</b>	<b>x(adj)</b>	<b>n</b>	<b>x</b>	<b>x(adj)</b>
Low	2942	1.5054	1.3069	4094	1.4286	1.2691
2	9651	1.3962	1.3085	10821	1.2903	1.2352
3	10289	1.3186	1.32	10512	1.254	1.2635
4	10752	1.2531	1.3259	10165	1.1909	1.2528
High	6126	1.2817	1.3852	5952	1.1453	1.2329
Eta		0.08			0.104	
Beta			0.028			0.018
<b>Curriculum</b>						
Coll Prep	13561	1.2352	1.3305	15853	1.1623	1.2426
General	22733	1.3592	1.3217	23905	1.2952	1.2504
Vo-Tech	3465	1.4846	1.3577	1786	1.4156	1.3017
Eta		0.082			0.097	
Beta			0.011			0.016
<b>Grades</b>						
D, C-	3895	1.7904	1.6779	2587	1.7116	1.593
C, C+	7646	1.4533	1.4251	6025	1.4125	1.3709
B-, B	11206	1.2992	1.3064	10712	1.277	1.2724
B+, A-	11659	1.2052	1.2379	14174	1.1738	1.1945
A	5353	1.1393	1.1752	8046	1.0764	1.1153
Eta		0.201			0.212	
Beta			0.153			0.159
<b>Hrs Work/Week</b>						
None	21789	1.2508	1.2585	24635	1.2328	1.2239
5 or less	9053	1.2871	1.3232	9992	1.2161	1.2573
6 to 10	4108	1.4088	1.4062	4068	1.2723	1.2798
11 to 15	1763	1.5432	1.4901	1281	1.4176	1.3771
16 to 20	1374	1.7244	1.6266	728	1.4839	1.4011
21 to 25	663	1.7162	1.6104	366	1.5116	1.4056
26 to 30	331	1.8463	1.6935	196	1.5215	1.3814
31+	678	1.8623	1.6636	279	1.6911	1.5311
Eta		0.161			0.091	
Beta			0.12			0.063
<b>Hrs Prefer Wrk</b>						
None	2358	1.4191	1.4481	1694	1.3698	1.3766
5 or less	6026	1.1994	1.2496	8484	1.1644	1.1916
6 to 10	10150	1.246	1.2844	13378	1.2056	1.2218
11 to 15	6310	1.2722	1.3032	6717	1.2255	1.2336
16 to 20	5760	1.3198	1.3092	5034	1.3021	1.2798
21 to 25	3355	1.4171	1.3733	2825	1.37	1.3288
26 to 30	2266	1.456	1.3728	1638	1.3561	1.2892
31+	3533	1.6672	1.5084	1775	1.5271	1.4288
Eta		0.143			0.119	
Beta			0.082			0.08
R squared	0.088			0.078		

**Table A.8. Prevalence of Heavy Alcohol Use Predicted by Actual and Preferred Hours of Work, Background, and Educational Success: Multiple Classification Analyses of 10th Graders, Males and Females in the Classes of 1992-1998**

	Males: 2 Wks Heavy Alcohol Use			Females: 2 Wks Heavy Alcohol Use		
	n	x	x(adj)	n	x	x(adj)
<b>Base Year</b>						
1992	5395	1.5184	1.5335	5649	1.3521	1.3513
1993	5700	1.607	1.5994	5945	1.3973	1.3849
1994	6016	1.637	1.6175	6095	1.3683	1.3584
1995	6309	1.6241	1.6291	6363	1.4226	1.4216
1996	5775	1.6305	1.6108	5962	1.4417	1.4406
1997	5741	1.6566	1.6692	6001	1.4273	1.4329
1998	5504	1.6236	1.6398	6026	1.4584	1.478
Eta		0.034			0.038	
Beta			0.032			0.046
<b>Race</b>						
Black	3724	1.3931	1.3351	4598	1.2144	1.162
White	29759	1.6383	1.643	30355	1.4397	1.4509
Hispanic	3528	1.7	1.673	3756	1.4596	1.4163
Other	3429	1.5655	1.6157	3332	1.3556	1.3744
Eta		0.064			0.077	
Beta			0.075			0.096
<b>College Plans</b>						
Definitely won't	2727	2.1705	1.889	1616	1.8894	1.6826
Probably won't	4885	1.9155	1.7203	3209	1.574	1.4288
Probably will	12611	1.5905	1.5682	10597	1.4513	1.3953
Definitely will	20218	1.4827	1.5818	26618	1.345	1.3973
Eta		0.169			0.126	
Beta			0.073			0.059
<b>Region</b>						
South	8072	1.5604	1.6002	8249	1.3889	1.4055
NE	11346	1.6071	1.5862	11767	1.4275	1.4068
NC	13645	1.6731	1.6683	14169	1.4101	1.4221
West	7377	1.5791	1.5766	7855	1.4067	1.3987
Eta		0.037			0.014	
Beta			0.033			0.01
<b>Urbanicity</b>						
Farm	1702	1.8393	1.7581	1488	1.3886	1.3964
Country	3863	1.7277	1.6728	4056	1.4669	1.4581
Non SMSA	5000	1.7737	1.7628	5689	1.5194	1.5179
Non S-R	21123	1.5835	1.5843	21450	1.3947	1.389
Self-Rep	8752	1.5069	1.5512	9358	1.358	1.3748
Eta		0.082			0.055	
Beta			0.061			0.051

Table A.8, cont

Parent Ed	Males: 2 Wks Heavy Alcohol Use			Females: 2 Wks Heavy Alcohol Use		
	n	x	x(adj)	n	x	x(adj)
Low	2740	1.7509	1.5653	3901	1.5017	1.386
2	9985	1.6959	1.5726	11094	1.45	1.386
3	11579	1.6197	1.6056	11869	1.4169	1.4168
4	10633	1.5353	1.6238	10093	1.355	1.4108
High	5503	1.5443	1.7191	5083	1.347	1.4649
Eta		0.061			0.052	
Beta			0.039			0.026
<b>Curriculum</b>						
Coll Prep	20303	1.4681	1.5875	23704	1.3212	1.3871
General	15792	1.7349	1.6402	16149	1.5257	1.4447
Vo-Tech	4345	1.8652	1.6517	2187	1.5218	1.4054
Eta		0.128			0.108	
Beta			0.023			0.029
<b>Grades</b>						
D, C-	4328	2.1496	2.0378	2836	1.8197	1.7601
C, C+	9792	1.7798	1.7523	8102	1.6086	1.5934
B-, B	12315	1.5904	1.6054	12528	1.4199	1.423
B+, A-	9792	1.3928	1.4324	12638	1.2921	1.3076
A	4212	1.2708	1.3137	5937	1.1745	1.1845
Eta		0.208			0.188	
Beta			0.17			0.169
<b>Hrs Work/Week</b>						
None	20703	1.5207	1.5514	24536	1.3823	1.3937
5 or less	4971	1.5472	1.6005	5675	1.3232	1.3618
6 to 10	3639	1.611	1.6399	3816	1.416	1.4212
11 to 15	3042	1.6846	1.6824	2594	1.4986	1.4777
16 to 20	3469	1.7494	1.681	2751	1.5474	1.4842
21 to 25	2264	1.8442	1.7298	1452	1.6158	1.5204
26 to 30	1263	1.9466	1.7492	764	1.6664	1.5505
31+	1090	2.2458	2.013	453	1.5323	1.3917
Eta		0.13			0.083	
Beta			0.077			0.047
<b>Hrs Prefer Wrk</b>						
None	2138	1.6574	1.7433	1685	1.4147	1.4649
5 or less	2428	1.4171	1.5211	3736	1.2555	1.3167
6 to 10	6367	1.4293	1.5219	8983	1.3239	1.3673
11 to 15	6508	1.5011	1.5579	8125	1.3695	1.3819
16 to 20	8241	1.5713	1.5805	8395	1.4472	1.4219
21 to 25	6055	1.6492	1.6168	5279	1.4961	1.4546
26 to 30	4016	1.7932	1.698	3355	1.5456	1.4815
31+	4688	1.9883	1.7979	2483	1.5943	1.5309
Eta		0.145			0.099	
Beta			0.075			0.058
R squared	0.08			0.061		

**Table A.9. Prevalence of Heavy Alcohol Use Predicted by Actual and Preferred Hours of Work, Background, and Educational Success: Multiple Classification Analyses of 12th Graders, Males and Females in the Classes of 1992-1998**

	Males: 2 Wks Heavy Alcohol Use			Females: 2 Wks Heavy Alcohol Use		
	n	x	x(adj)	n	x	x(adj)
<b>Base Year</b>						
1992	868	1.8132	1.7938	988	1.4117	1.4105
1993	824	1.7714	1.786	991	1.443	1.4256
1994	791	1.8776	1.8647	982	1.3601	1.3562
1995	815	1.882	1.8847	948	1.4932	1.4865
1996	819	1.8921	1.8897	872	1.4844	1.5005
1997	819	1.875	1.8755	927	1.5832	1.5809
1998	795	1.9901	2.0084	900	1.5079	1.5263
Eta		0.047			0.069	
Beta			0.05			0.073
<b>Race</b>						
Black	517	1.4685	1.3925	785	1.1958	1.1484
White	4458	1.9474	1.9446	4970	1.5289	1.5297
Hispanic	360	1.8933	1.9705	445	1.3839	1.4431
Other	397	1.51	1.5709	408	1.3279	1.345
Eta		0.124			0.118	
Beta			0.132			0.129
<b>College Plans</b>						
Definitely won't	771	2.1616	1.9706	603	1.6293	1.5053
Probably won't	664	1.9722	1.8253	646	1.5092	1.403
Probably will	1379	1.8369	1.824	1321	1.4707	1.4501
Definitely will	2918	1.7864	1.8764	4038	1.4351	1.4773
Eta		0.095			0.058	
Beta			0.034			0.026
<b>Region</b>						
South	971	1.8891	1.8963	1196	1.4963	1.4812
NE	1681	1.9741	1.9335	1907	1.5308	1.4952
NC	2014	1.8784	1.9027	2340	1.4269	1.4718
West	1067	1.6757	1.6872	1165	1.4138	1.3974
Eta		0.075			0.05	
Beta			0.066			0.034
<b>Urbanicity</b>						
Farm	231	2.08	2.0064	197	1.5024	1.4811
Country	462	1.8999	1.8325	483	1.3877	1.4078
Non SMSA	905	1.9455	1.9161	1144	1.4949	1.5054
Non S-R	2837	1.8464	1.8572	3184	1.4578	1.4543
Self-Rep	1296	1.8232	1.8573	1601	1.4856	1.4815
Eta		0.044			0.028	
Beta			0.027			0.026

Table A.9, cont

Parent Ed	Males: 2 Wks Heavy Alcohol Use			Females: 2 Wks Heavy Alcohol Use		
	n	x	x(adj)	n	x	x(adj)
Low	363	1.8187	1.7909	538	1.3523	1.3299
2	1384	1.9381	1.85	1724	1.4496	1.4045
3	1698	1.8654	1.8346	1967	1.4746	1.4787
4	1465	1.8249	1.8786	1573	1.4642	1.4826
High	822	1.8715	2	805	1.5693	1.6345
Eta		0.032			0.051	
Beta			0.043			0.08
<b>Curriculum</b>						
Coll Prep	3240	1.7447	1.7967	4183	1.3994	1.4282
General	1877	2.0451	1.9858	2015	1.5894	1.5344
Vo-Tech	615	2.0002	1.9077	411	1.5577	1.5342
Eta		0.107			0.091	
Beta			0.064			0.052
<b>Grades</b>						
D, C-	268	2.4311	2.385	155	2.0888	2.0996
C, C+	1201	2.0631	2.074	907	1.6356	1.6546
B-, B	2005	1.8688	1.8622	2007	1.5354	1.5387
B+, A-	1626	1.7294	1.7352	2456	1.3975	1.3946
A	632	1.6353	1.6401	1083	1.2689	1.2517
Eta		0.137			0.154	
Beta			0.133			0.163
<b>Hrs Work/Week</b>						
None	1517	1.7779	1.8479	1614	1.3923	1.4251
5 or less	369	1.8392	1.9267	441	1.3048	1.3301
6 to 10	507	1.7597	1.851	650	1.4014	1.4117
11 to 15	572	1.9079	1.9232	869	1.477	1.4868
16 to 20	925	1.9014	1.8652	1206	1.5203	1.508
21 to 25	784	1.9243	1.8713	913	1.5439	1.5073
26 to 30	533	1.8944	1.806	531	1.5472	1.5179
31+	526	2.0674	1.9318	384	1.5971	1.5574
Eta		0.065			0.082	
Beta			0.028			0.058
<b>Hrs Prefer Wrk</b>						
None	496	1.8352	1.879	392	1.5392	1.5728
5 or less	188	1.7056	1.7243	298	1.373	1.452
6 to 10	567	1.6054	1.6752	848	1.3734	1.436
11 to 15	780	1.8579	1.8707	1188	1.4384	1.4465
16 to 20	1275	1.9343	1.9375	1594	1.4625	1.441
21 to 25	972	1.855	1.851	1035	1.5284	1.493
26 to 30	688	1.881	1.8659	710	1.4952	1.4642
31+	767	2.0469	1.9626	543	1.5365	1.5241
Eta		0.085			0.057	
Beta			0.061			0.038
R squared	0.057			0.062		

**Table A.10. Prevalence of Monthly Marijuana/Hashish Use Predicted by Actual and Preferred Hours of Work, Background, and Educational Success: Multiple Classification Analyses of 8th Graders, Males and Females in the Classes of 1992-1998**

	Males: Monthly Marij/Hashish Use			Females: Monthly Marij/Hashish Use		
	n	x	x(adj)	n	x	x(adj)
<b>Base Year</b>						
1992	6283	1.0774	1.0721	6403	1.0684	1.0563
1993	6091	1.1217	1.1166	6193	1.0789	1.0739
1994	5842	1.2176	1.2115	5924	1.1258	1.1208
1995	5672	1.221	1.2255	5909	1.16	1.1564
1996	5760	1.2982	1.2958	6048	1.2187	1.2168
1997	6045	1.2749	1.2828	6490	1.182	1.1934
1998	5940	1.2561	1.2628	6279	1.1774	1.1928
Eta		0.094			0.082	
Beta			0.099			0.092
<b>Race</b>						
Black	5474	1.2151	1.2068	6268	1.0963	1.0904
White	26523	1.1871	1.1985	27550	1.1392	1.1527
Hispanic	4389	1.3543	1.3095	4380	1.2383	1.1679
Other	5247	1.1823	1.1709	5047	1.149	1.1439
Eta		0.063			0.056	
Beta			0.045			0.036
<b>College Plans</b>						
Definitely won't	2069	1.5931	1.467	1220	1.652	1.5264
Probably won't	3635	1.4032	1.3233	2618	1.423	1.3334
Probably will	12742	1.2194	1.21	10971	1.1849	1.1634
Definitely will	23187	1.1364	1.1654	28436	1.081	1.1029
Eta		0.144			0.194	
Beta			0.092			0.137
<b>Region</b>						
South	7758	1.1682	1.1864	8271	1.1023	1.1203
NE	11008	1.1916	1.1925	11269	1.144	1.14
NC	14640	1.2068	1.2035	15378	1.1363	1.1366
West	8226	1.2687	1.2563	8328	1.2005	1.1875
Eta		0.041			0.049	
Beta			0.031			0.035
<b>Urbanicity</b>						
Farm	1961	1.2252	1.1606	1678	1.173	1.1258
Country	3791	1.1499	1.1301	3761	1.1194	1.1141
Non SMSA	5359	1.2329	1.228	6019	1.1234	1.1145
Non S-R	20821	1.2293	1.2272	21549	1.1718	1.1693
Self-Rep	9701	1.167	1.195	10238	1.1026	1.1228
Eta		0.04			0.048	
Beta			0.038			0.04

Table A.10, cont

Parent Ed	Males: Monthly Marij/Hashish Use			Females: Monthly Marij/Hashish Use		
	n	x	x(adj)	n	x	x(adj)
Low	3212	1.3031	1.1589	4370	1.2478	1.1362
2	10158	1.2384	1.1842	11375	1.1702	1.132
3	10754	1.2079	1.2083	10912	1.1564	1.1624
4	11183	1.1682	1.2172	10489	1.0957	1.1397
High	6325	1.1802	1.2532	6099	1.0829	1.1477
Eta		0.047			0.077	
Beta			0.032			0.018
<b>Curriculum</b>						
Coll Prep	14048	1.1339	1.2114	16289	1.0786	1.1408
General	23892	1.2394	1.2062	25065	1.1806	1.1466
Vo-Tech	3693	1.2846	1.2048	1891	1.2258	1.1408
Eta		0.067			0.082	
Beta			0.003			0.005
<b>Grades</b>						
D, C-	4094	1.6217	1.5497	2777	1.5389	1.4416
C, C+	8157	1.2973	1.2793	6410	1.2569	1.2259
B-, B	11721	1.1813	1.188	11199	1.1501	1.1504
B+, A-	12125	1.0944	1.1164	14674	1.08	1.0976
A	5536	1.0745	1.092	8185	1.0289	1.0544
Eta		0.195			0.199	
Beta			0.161			0.149
<b>Hrs Work/Week</b>						
None	22752	1.1906	1.1909	25773	1.1396	1.1347
5 or less	9446	1.162	1.1922	10336	1.1244	1.1523
6 to 10	4336	1.2305	1.2345	4163	1.1374	1.1415
11 to 15	1865	1.2942	1.2618	1338	1.2045	1.1738
16 to 20	1454	1.3399	1.2826	755	1.3038	1.2371
21 to 25	706	1.366	1.3012	376	1.2793	1.1964
26 to 30	359	1.429	1.3445	204	1.278	1.1684
31+	715	1.463	1.3372	301	1.379	1.271
Eta		0.074			0.057	
Beta			0.043			0.031
<b>Hrs Prefer Wrk</b>						
None	2500	1.3327	1.3051	1758	1.2159	1.2
5 or less	6386	1.1238	1.1372	8855	1.0879	1.0964
6 to 10	10617	1.1536	1.1712	13866	1.1109	1.1206
11 to 15	6572	1.178	1.2027	6956	1.1312	1.1425
16 to 20	5990	1.2052	1.2123	5239	1.1831	1.1734
21 to 25	3455	1.2606	1.2498	2953	1.2201	1.202
26 to 30	2377	1.2784	1.2483	1740	1.2655	1.2311
31+	3737	1.3848	1.305	1879	1.2964	1.2448
Eta		0.098			0.092	
Beta			0.065			0.068
R squared	0.067			0.076		

**Table A.11. Prevalence of Monthly Marijuana/Hashish Use Predicted by Actual and Preferred Hours of Work, Background, and Educational Success: Multiple Classification Analyses of 10th Graders, Males and Females in the Classes of 1992-1998**

	Males: Monthly Marij/Hashish Use			Females: Monthly Marij/Hashish Use		
	n	x	x(adj)	n	x	x(adj)
<b>Base Year</b>						
1992	5505	1.2068	1.2057	5787	1.1331	1.1286
1993	5840	1.3029	1.3004	6065	1.1703	1.1611
1994	6127	1.4561	1.4353	6234	1.2905	1.276
1995	6428	1.5135	1.5195	6477	1.3458	1.3405
1996	5902	1.6355	1.6362	6107	1.4405	1.4481
1997	5870	1.6302	1.6381	6109	1.4121	1.422
1998	5629	1.5831	1.5936	6153	1.4152	1.4315
Eta		0.121			0.117	
Beta			0.124			0.125
<b>Race</b>						
Black	3945	1.4209	1.3817	4834	1.1727	1.1351
White	30182	1.48	1.4917	30777	1.3392	1.353
Hispanic	3634	1.545	1.4827	3890	1.3378	1.2769
Other	3540	1.4538	1.4619	3431	1.299	1.2975
Eta		0.022			0.055	
Beta			0.026			0.072
<b>College Plans</b>						
Definitely won't	2816	1.9835	1.7898	1661	1.8667	1.7009
Probably won't	5017	1.8114	1.6873	3279	1.5563	1.4476
Probably will	12871	1.5019	1.4846	10885	1.3747	1.3353
Definitely will	20598	1.3124	1.3799	27106	1.2314	1.2706
Eta		0.169			0.153	
Beta			0.104			0.096
<b>Region</b>						
South	8196	1.5257	1.5394	8412	1.3524	1.3632
NE	11540	1.4446	1.4337	11958	1.3118	1.2939
NC	14039	1.4746	1.4849	14536	1.3	1.311
West	7526	1.4828	1.4654	8026	1.3192	1.3146
Eta		0.022			0.02	
Beta			0.029			0.025
<b>Urbanicity</b>						
Farm	1735	1.3175	1.254	1530	1.2061	1.1881
Country	3983	1.4203	1.3888	4167	1.2698	1.2584
Non SMSA	5134	1.4714	1.4746	5855	1.3199	1.3297
Non S-R	21527	1.5027	1.5017	21830	1.3452	1.3393
Self-Rep	8922	1.4784	1.5053	9550	1.2898	1.3052
Eta		0.033			0.036	
Beta			0.046			0.037

Table A.11, cont

Parent Ed	Males: Monthly Marij/Hashish Use			Females: Monthly Marij/Hashish Use		
	n	x	x(adj)	n	x	x(adj)
Low	2861	1.5289	1.3609	4061	1.3595	1.246
2	10257	1.53	1.4235	11382	1.3596	1.295
3	11779	1.4995	1.4851	12082	1.3357	1.3344
4	10823	1.4299	1.5118	10246	1.2719	1.3328
High	5582	1.403	1.5564	5159	1.2367	1.3508
Eta		0.039			0.047	
Beta			0.043			0.031
<b>Curriculum</b>						
Coll Prep	20609	1.3334	1.4572	24042	1.2325	1.3066
General	16226	1.6219	1.5203	16629	1.4264	1.3381
Vo-Tech	4466	1.6207	1.4184	2259	1.4133	1.2747
Eta		0.115			0.099	
Beta			0.029			0.019
<b>Grades</b>						
D, C-	4410	2.1295	2.0023	2932	1.8398	1.7431
C, C+	10055	1.6352	1.5964	8337	1.499	1.4711
B-, B	12598	1.3967	1.4116	12805	1.3065	1.3087
B+, A-	9981	1.259	1.3049	12862	1.1867	1.2093
A	4259	1.1842	1.256	5995	1.1112	1.1442
Eta		0.217			0.198	
Beta			0.172			0.163
<b>Hrs Work/Week</b>						
None	21118	1.4423	1.4599	25079	1.2928	1.3064
5 or less	5048	1.3668	1.4355	5800	1.2023	1.2479
6 to 10	3740	1.4306	1.469	3900	1.2625	1.2706
11 to 15	3098	1.4965	1.4925	2638	1.4241	1.3919
16 to 20	3554	1.5776	1.5107	2779	1.4912	1.4069
21 to 25	2311	1.6674	1.5716	1482	1.6189	1.5085
26 to 30	1317	1.6627	1.5019	781	1.5185	1.3935
31+	1115	1.8305	1.6698	472	1.5688	1.4488
Eta		0.079			0.102	
Beta			0.036			0.06
<b>Hrs Prefer Wrk</b>						
None	2191	1.529	1.5553	1708	1.2626	1.2976
5 or less	2500	1.2336	1.3061	3857	1.1575	1.2136
6 to 10	6541	1.3368	1.4062	9231	1.2067	1.2571
11 to 15	6610	1.3912	1.4457	8235	1.282	1.3017
16 to 20	8387	1.4912	1.5025	8545	1.384	1.3615
21 to 25	6156	1.5183	1.4929	5369	1.4237	1.3728
26 to 30	4105	1.5991	1.5199	3416	1.4657	1.393
31+	4812	1.7138	1.575	2569	1.4603	1.386
Eta		0.102			0.107	
Beta			0.054			0.06
R squared	0.081			0.08		

**Table A.12. Prevalence of Monthly Marijuana/Hashish Use Predicted by Actual and Preferred Hours of Work, Background, and Educational Success: Multiple Classification Analyses of 12th Graders, Males and Females in the Classes of 1992-1998**

	Males: Monthly Marij/Hashish Use			Females: Monthly Marij/Hashish Use		
	n	x	x(adj)	n	x	x(adj)
<b>Base Year</b>						
1992	886	1.3121	1.2891	1004	1.195	1.1892
1993	863	1.3605	1.3426	1018	1.3044	1.2966
1994	809	1.6972	1.6804	998	1.3361	1.3375
1995	853	1.7187	1.7211	971	1.3798	1.3674
1996	850	1.7049	1.745	891	1.4354	1.4658
1997	848	1.7944	1.7897	973	1.5812	1.5706
1998	831	1.8472	1.868	905	1.4421	1.4503
Eta		0.135			0.107	
Beta			0.145			0.11
<b>Race</b>						
Black	551	1.5753	1.5141	814	1.1627	1.1414
White	4578	1.6557	1.6601	5050	1.436	1.4376
Hispanic	395	1.4367	1.4742	469	1.2541	1.2826
Other	416	1.6009	1.5985	427	1.2577	1.2476
Eta		0.04			0.094	
Beta			0.041			0.099
<b>College Plans</b>						
Definitely won't	842	1.8177	1.6494	632	1.5008	1.4206
Probably won't	701	1.7608	1.6621	670	1.5392	1.4715
Probably will	1416	1.7243	1.6862	1363	1.4132	1.3952
Definitely will	2981	1.5012	1.59	4096	1.323	1.3524
Eta		0.091			0.073	
Beta			0.029			0.036
<b>Region</b>						
South	994	1.7681	1.751	1223	1.509	1.4906
NE	1734	1.6995	1.6941	1944	1.372	1.3423
NC	2102	1.5217	1.5318	2404	1.3142	1.3491
West	1109	1.6023	1.6068	1189	1.3889	1.3858
Eta		0.065			0.064	
Beta			0.058			0.051
<b>Urbanicity</b>						
Farm	240	1.2466	1.2338	197	1.2527	1.2291
Country	473	1.4209	1.3855	497	1.2687	1.2873
Non SMSA	950	1.7094	1.712	1166	1.367	1.3847
Non S-R	2928	1.6667	1.683	3262	1.3977	1.3931
Self-Rep	1347	1.6353	1.6128	1637	1.3998	1.3936
Eta		0.072			0.038	
Beta			0.08			0.036

Table A.12, cont

Parent Ed	Males: Monthly Marij/Hashish Use			Females: Monthly Marij/Hashish Use		
	n	x	x(adj)	n	x	x(adj)
Low	397	1.4821	1.4746	583	1.2062	1.1704
2	1456	1.6266	1.5587	1767	1.3661	1.317
3	1748	1.6678	1.629	2000	1.4013	1.4038
4	1509	1.6558	1.6957	1598	1.3776	1.4054
High	828	1.5791	1.7113	812	1.4806	1.5524
Eta		0.034			0.06	
Beta			0.048			0.088
<b>Curriculum</b>						
Coll Prep	3311	1.5015	1.5678	4255	1.3097	1.34
General	1976	1.7988	1.7092	2083	1.5094	1.4532
Vo-Tech	653	1.7695	1.7045	423	1.4372	1.4091
Eta		0.099			0.087	
Beta			0.048			0.049
<b>Grades</b>						
D, C-	280	2.3152	2.2728	161	1.9677	1.9345
C, C+	1269	1.9074	1.8792	939	1.577	1.5736
B-, B	2081	1.6538	1.6547	2065	1.4167	1.4087
B+, A-	1660	1.3664	1.388	2505	1.3146	1.3216
A	649	1.3887	1.404	1090	1.1994	1.2063
Eta		0.175			0.136	
Beta			0.161			0.129
<b>Hrs Work/Week</b>						
None	1587	1.5534	1.5881	1660	1.3135	1.3651
5 or less	385	1.4317	1.4968	445	1.2375	1.2831
6 to 10	513	1.6149	1.7239	666	1.3824	1.3909
11 to 15	588	1.6736	1.7385	883	1.3457	1.3438
16 to 20	950	1.6663	1.6667	1230	1.3994	1.3799
21 to 25	801	1.6998	1.6285	929	1.4414	1.393
26 to 30	551	1.7193	1.6221	546	1.4472	1.4041
31+	564	1.7004	1.587	402	1.5778	1.5344
Eta		0.055			0.072	
Beta			0.043			0.046
<b>Hrs Prefer Wrk</b>						
None	509	1.5792	1.6357	398	1.3422	1.3647
5 or less	200	1.689	1.7028	300	1.2007	1.2526
6 to 10	592	1.403	1.4518	876	1.2917	1.3373
11 to 15	791	1.5083	1.5337	1203	1.3714	1.3792
16 to 20	1307	1.6287	1.628	1630	1.3981	1.3845
21 to 25	986	1.6931	1.6696	1050	1.4233	1.4043
26 to 30	737	1.7674	1.7417	734	1.4603	1.4388
31+	818	1.7303	1.6844	569	1.4102	1.3822
Eta		0.075			0.057	
Beta			0.057			0.036
R squared	0.072			0.06		

**Table A.13. Interpersonal Aggression Predicted by Actual and Preferred Hours of Work, Background, and Educational Success: Multiple Classification Analyses of 8th Graders, Males and Females in the Classes of 1992-1998**

	Males: Interpersonal Aggression			Females: Interpersonal Aggression		
	n	x	x(adj)	n	x	x(adj)
<b>Base Year</b>						
1992	2485	1.5089	1.5034	2613	1.2932	1.2791
1993	2522	1.4996	1.4977	2616	1.3116	1.3023
1994	2356	1.559	1.5501	2531	1.3061	1.3024
1995	2236	1.5023	1.5134	2423	1.3202	1.3201
1996	2355	1.527	1.5164	2475	1.3095	1.315
1997	1614	1.4754	1.4946	1727	1.3271	1.3383
1998	1577	1.4971	1.5029	1742	1.2634	1.2852
Eta		0.028			0.03	
Beta			0.021			0.03
<b>Race</b>						
Black	1823	1.6637	1.6223	2146	1.3942	1.3734
White	10102	1.458	1.4704	10740	1.2584	1.2699
Hispanic	1376	1.6834	1.6624	1390	1.4562	1.3942
Other	1842	1.5318	1.5203	1850	1.3602	1.3644
Eta		0.101			0.117	
Beta			0.08			0.085
<b>College Plans</b>						
Definitely won't	733	1.9896	1.7583	408	1.7683	1.6068
Probably won't	1259	1.7574	1.626	912	1.5687	1.4457
Probably will	4577	1.5133	1.5058	3961	1.3613	1.335
Definitely will	8575	1.4348	1.4779	10844	1.2451	1.2712
Eta		0.163			0.189	
Beta			0.08			0.112
<b>Region</b>						
South	2596	1.5004	1.5267	2925	1.3268	1.3421
NE	4144	1.5038	1.501	4311	1.2795	1.2868
NC	5239	1.5428	1.5385	5607	1.3119	1.3015
West	3165	1.4823	1.4715	3283	1.3083	1.3029
Eta		0.028			0.028	
Beta			0.03			0.031
<b>Urbanicity</b>						
Farm	753	1.5241	1.4783	674	1.2962	1.2958
Country	1450	1.4981	1.4701	1526	1.277	1.2845
Non SMSA	1960	1.4998	1.4795	2262	1.2937	1.285
Non S-R	7710	1.5063	1.5119	8252	1.3046	1.3056
Self-Rep	3271	1.5371	1.5589	3412	1.3286	1.3289
Eta		0.016			0.025	
Beta			0.034			0.025

Table A.13, cont

	<b>Males: Interpersonal Aggression</b>			<b>Females: Interpersonal Aggression</b>		
<b>Parent Ed</b>	<b>n</b>	<b>x</b>	<b>x(adj)</b>	<b>n</b>	<b>x</b>	<b>x(adj)</b>
Low	1100	1.6518	1.4515	1434	1.4653	1.3274
2	3656	1.5648	1.4761	4229	1.3376	1.2893
3	3914	1.524	1.5233	4236	1.3125	1.3202
4	4102	1.4282	1.5065	3950	1.2348	1.2845
High	2372	1.4924	1.5876	2276	1.2528	1.3289
Eta		0.075			0.109	
Beta			0.046			0.032
<b>Curriculum</b>						
Coll Prep	5377	1.4335	1.5361	6459	1.2441	1.3161
General	8475	1.5279	1.4842	8968	1.3353	1.2927
Vo-Tech	1293	1.7364	1.5964	699	1.4839	1.3655
Eta		0.095			0.098	
Beta			0.041			0.029
<b>Grades</b>						
D, C-	1452	2.0622	1.9782	965	1.726	1.6367
C, C+	2778	1.6575	1.6316	2162	1.4525	1.4135
B-, B	4261	1.5116	1.5135	4164	1.3448	1.3383
B+, A-	4567	1.3582	1.3827	5592	1.2459	1.2585
A	2087	1.2747	1.3098	3243	1.1332	1.1724
Eta		0.256			0.245	
Beta			0.216			0.19
<b>Hrs Work/Week</b>						
None	8060	1.4153	1.4178	9274	1.2853	1.2705
5 or less	3546	1.4912	1.5328	4018	1.2861	1.3357
6 to 10	1660	1.6237	1.6234	1652	1.3448	1.3559
11 to 15	708	1.7966	1.7545	550	1.4024	1.3698
16 to 20	543	1.8572	1.7708	296	1.5168	1.4365
21 to 25	265	1.8811	1.7833	153	1.5836	1.5068
26 to 30	143	1.9888	1.836	84	1.4787	1.2921
31+	221	2.0402	1.8458	98	1.5368	1.4218
Eta		0.178			0.09	
Beta			0.144			0.078
<b>Hrs Prefer Wrk</b>						
None	776	1.5561	1.6169	600	1.3868	1.3948
5 or less	2196	1.4013	1.4348	3194	1.2172	1.2327
6 to 10	3945	1.4117	1.4452	5262	1.2615	1.2737
11 to 15	2396	1.4764	1.5088	2680	1.3075	1.321
16 to 20	2247	1.5259	1.5282	2032	1.3252	1.3101
21 to 25	1285	1.5609	1.5186	1059	1.4091	1.3779
26 to 30	921	1.6534	1.5758	655	1.4613	1.4005
31+	1378	1.8519	1.6999	644	1.6208	1.5414
Eta		0.151			0.152	
Beta			0.091			0.115
R squared	0.116			0.103		

**Table A.14. Interpersonal Aggression Predicted by Actual and Preferred Hours of Work, Background, and Educational Success: Multiple Classification Analyses of 10th Graders, Males and Females in the Classes of 1992-1998**

	Males: Interpersonal Aggression			Females: Interpersonal Aggression		
	n	x	x(adj)	n	x	x(adj)
<b>Base Year</b>						
1992	2409	1.4098	1.4071	2638	1.2102	1.2042
1993	2614	1.4043	1.4049	2793	1.1709	1.1694
1994	2702	1.4128	1.4065	2856	1.1954	1.191
1995	2872	1.4081	1.4176	2945	1.1963	1.2044
1996	2574	1.4043	1.4016	2757	1.183	1.188
1997	1661	1.3803	1.3859	1937	1.1983	1.1976
1998	1675	1.3676	1.363	1889	1.1836	1.1816
Eta		0.018			0.026	
Beta			0.019			0.026
<b>Race</b>						
Black	1417	1.5425	1.4959	1847	1.2337	1.2032
White	12429	1.3647	1.377	13071	1.1766	1.1844
Hispanic	1293	1.5559	1.489	1514	1.2434	1.2116
Other	1367	1.4386	1.4379	1383	1.2132	1.2153
Eta		0.087			0.054	
Beta			0.056			0.025
<b>College Plans</b>						
Definitely won't	1044	1.7559	1.5704	702	1.4576	1.3486
Probably won't	1950	1.5789	1.4546	1354	1.3269	1.2468
Probably will	5095	1.4202	1.4061	4395	1.2258	1.2012
Definitely will	8418	1.3042	1.3645	11365	1.145	1.1707
Eta		0.164			0.166	
Beta			0.068			0.084
<b>Region</b>						
South	3007	1.4011	1.4463	3195	1.1996	1.2254
NE	4780	1.3502	1.3493	5066	1.1954	1.1972
NC	5682	1.4267	1.4138	6121	1.1838	1.1729
West	3038	1.4329	1.4138	3434	1.1895	1.1822
Eta		0.043			0.013	
Beta			0.045			0.041
<b>Urbanicity</b>						
Farm	762	1.3695	1.3681	676	1.16	1.1906
Country	1595	1.3561	1.3306	1762	1.1894	1.189
Non SMSA	2138	1.3995	1.3897	2494	1.1818	1.1794
Non S-R	8750	1.4084	1.4073	9240	1.1916	1.1892
Self-Rep	3262	1.4114	1.4337	3642	1.2024	1.2049
Eta		0.022			0.019	
Beta			0.036			0.017

Table A.14, cont

Parent Ed	Males: Interpersonal Aggression			Females: Interpersonal Aggression		
	n	x	x(adj)	n	x	x(adj)
Low	1056	1.6251	1.4505	1631	1.29	1.2104
2	4006	1.4477	1.3708	4654	1.2182	1.1824
3	4775	1.4176	1.4116	5099	1.1864	1.1894
4	4396	1.3258	1.3888	4247	1.1582	1.193
High	2274	1.3253	1.4327	2185	1.1339	1.1952
Eta		0.1			0.091	
Beta			0.031			0.016
<b>Curriculum</b>						
Coll Prep	8530	1.2986	1.3827	10099	1.1353	1.174
General	6295	1.4951	1.4235	6763	1.2575	1.2133
Vo-Tech	1682	1.5683	1.4101	954	1.3107	1.2135
Eta		0.137			0.141	
Beta			0.025			0.042
<b>Grades</b>						
D, C-	1644	1.8392	1.734	1145	1.4608	1.3893
C, C+	3960	1.5212	1.4766	3320	1.2931	1.2576
B-, B	5044	1.3525	1.3585	5318	1.1869	1.1819
B+, A-	4073	1.2503	1.2972	5494	1.1284	1.1491
A	1787	1.2121	1.2841	2538	1.08	1.1245
Eta		0.23			0.213	
Beta			0.166			0.146
<b>Hrs Work/Week</b>						
None	8317	1.3446	1.3471	10169	1.1763	1.1802
5 or less	2048	1.29	1.3464	2497	1.1476	1.1773
6 to 10	1543	1.3851	1.4188	1677	1.2055	1.2151
11 to 15	1270	1.4493	1.4808	1122	1.1787	1.1795
16 to 20	1457	1.523	1.5008	1204	1.2462	1.2101
21 to 25	919	1.5844	1.5268	626	1.3172	1.2574
26 to 30	505	1.6222	1.4976	318	1.3723	1.2776
31+	447	1.8529	1.6729	204	1.411	1.3153
Eta		0.148			0.105	
Beta			0.102			0.055
<b>Hrs Prefer Wrk</b>						
None	832	1.4379	1.4907	694	1.1292	1.1606
5 or less	967	1.2633	1.3202	1525	1.1235	1.144
6 to 10	2574	1.2962	1.3591	3800	1.1366	1.1584
11 to 15	2724	1.2811	1.3398	3492	1.1609	1.1781
16 to 20	3407	1.3502	1.3608	3651	1.1947	1.1919
21 to 25	2454	1.4342	1.4094	2200	1.232	1.2066
26 to 30	1630	1.5192	1.4347	1381	1.29	1.2482
31+	1920	1.7127	1.5781	1073	1.3941	1.3266
Eta		0.174			0.15	
Beta			0.097			0.094
R squared	0.091			0.073		

**Table A.15. Interpersonal Aggression Predicted by Actual Hours of Work,  
Background, and Educational Success: Multiple Classification  
Analyses of 12th Graders, Males and Females in the Classes of 1992-1998\***

	Males: Interpersonal Aggression			Females: Interpersonal Aggression		
	n	x	x(adj)	n	x	x(adj)
<b>Base Year</b>						
1992	2042	1.3796	1.3763	2186	1.1326	1.1294
1993	2130	1.3926	1.3985	2262	1.155	1.1539
1994	1893	1.3615	1.3655	2180	1.1237	1.1236
1995	1966	1.3432	1.3349	2183	1.1465	1.1473
1996	1806	1.4006	1.4008	1994	1.1163	1.1192
1997	939	1.4039	1.4079	1054	1.1823	1.1829
1998	953	1.3995	1.3986	1058	1.1607	1.1622
Eta		0.029			0.051	
Beta			0.033			0.051
<b>Race</b>						
Black	1282	1.4765	1.4572	1630	1.1626	1.155
White	8834	1.3494	1.3534	9549	1.1316	1.1332
Hispanic	794	1.481	1.4646	869	1.1568	1.1529
Other	818	1.4569	1.4602	869	1.1909	1.1918
Eta		0.072			0.047	
Beta			0.063			0.043
<b>College Plans</b>						
Definitely won't	1483	1.6399	1.527	1235	1.2105	1.1764
Probably won't	1481	1.4591	1.3735	1403	1.17	1.145
Probably will	2992	1.3805	1.367	2601	1.1586	1.1463
Definitely will	5772	1.2921	1.3501	7679	1.1189	1.1331
Eta		0.156			0.08	
Beta			0.077			0.034
<b>Region</b>						
South	1900	1.423	1.4439	2370	1.1669	1.1772
NE	3454	1.3702	1.3699	3646	1.1629	1.1646
NC	4232	1.3703	1.3642	4672	1.1121	1.1108
West	2143	1.3755	1.3694	2230	1.1394	1.1284
Eta		0.026			0.063	
Beta			0.039			0.073
<b>Urbanicity</b>						
Farm	526	1.5044	1.4963	485	1.1321	1.1497
Country	821	1.3742	1.3495	859	1.1243	1.1276
Non SMSA	2046	1.3748	1.3842	2274	1.1332	1.1404
Non S-R	5686	1.353	1.354	6122	1.139	1.1388
Self-Rep	2649	1.418	1.4177	3178	1.1571	1.1489
Eta		0.051			0.026	
Beta			0.05			0.015

\*Preferred work hours do not appear in this table since they are on a different form than theft measures for 12th graders.

Table A.15, cont

Parent Ed	Males: Interpersonal Aggression			Females: Interpersonal Aggression		
	n	x	x(adj)	n	x	x(adj)
Low	832	1.5324	1.407	1247	1.1564	1.1317
2	2914	1.432	1.3786	3328	1.1641	1.1466
3	3535	1.3735	1.37	3853	1.1426	1.1421
4	2934	1.3426	1.3858	3009	1.1173	1.1324
High	1513	1.2818	1.3779	1481	1.122	1.1528
Eta		0.085			0.049	
Beta			0.013			0.019
<b>Curriculum</b>						
Coll Prep	6289	1.277	1.3338	7902	1.1153	1.1309
General	4136	1.4698	1.4184	4174	1.1791	1.1568
Vo-Tech	1303	1.59	1.4786	842	1.1966	1.1602
Eta		0.158			0.088	
Beta			0.071			0.035
<b>Grades</b>						
D, C-	606	1.8044	1.71	333	1.2992	1.2648
C, C+	2562	1.4741	1.4253	1806	1.207	1.1883
B-, B	4238	1.3765	1.3706	4233	1.1568	1.151
B+, A-	3080	1.28	1.3163	4602	1.1126	1.1192
A	1243	1.2364	1.3132	1943	1.0869	1.107
Eta		0.173			0.121	
Beta			0.119			0.088
<b>Hrs Work/Week</b>						
None	3060	1.3317	1.3344	3301	1.1354	1.1337
5 or less	814	1.3384	1.3864	931	1.1009	1.119
6 to 10	994	1.2535	1.2784	1174	1.1029	1.1099
11 to 15	1185	1.3061	1.3306	1651	1.1018	1.1075
16 to 20	1784	1.3552	1.3704	2234	1.1434	1.1421
21 to 25	1554	1.3982	1.3896	1696	1.1606	1.1572
26 to 30	1102	1.4626	1.4269	1072	1.1888	1.1807
31+	1236	1.6364	1.5754	860	1.2318	1.2181
Eta		0.139			0.094	
Beta			0.105			0.077
<b>R squared</b>	0.067			0.033		

**Table A.16. Victimization Predicted by Actual and Preferred  
Hours of Work, Background, and Educational Success: Multiple Classification  
Analyses of 8th Graders, Males and Females in the Classes of 1992-1998**

	Males: Victimization			Females: Victimization		
	n	x	x(adj)	n	x	x(adj)
<b>Base Year</b>						
1992	2583	1.4372	1.4341	2822	1.3254	1.3214
1993	2580	1.4199	1.4175	2743	1.3157	1.317
1994	2489	1.444	1.4457	2508	1.3155	1.3125
1995	2230	1.4239	1.4253	2409	1.3115	1.3108
1996	2454	1.4462	1.4496	2678	1.3088	1.3126
1997	1586	1.4183	1.421	1784	1.3281	1.3292
1998	1629	1.4205	1.4171	1716	1.3231	1.326
Eta		0.018			0.014	
Beta			0.02			0.013
<b>Race</b>						
Black	1768	1.4739	1.4797	2209	1.4287	1.4208
White	10351	1.4135	1.4146	11019	1.2826	1.2864
Hispanic	1531	1.4475	1.4357	1501	1.3524	1.3432
Other	1901	1.475	1.4731	1930	1.3641	1.3587
Eta		0.042			0.108	
Beta			0.042			0.098
<b>College Plans</b>						
Definitely won't	796	1.5741	1.5352	487	1.5275	1.4841
Probably won't	1359	1.4322	1.4172	979	1.361	1.3477
Probably will	4605	1.4197	1.4255	4075	1.3386	1.3444
Definitely will	8791	1.4242	1.427	11118	1.2971	1.298
Eta		0.054			0.086	
Beta			0.04			0.073
<b>Region</b>						
South	2728	1.3703	1.3763	3018	1.2995	1.3092
NE	4269	1.4292	1.4302	4440	1.2931	1.2976
NC	5324	1.4385	1.4376	5873	1.3352	1.3274
West	3230	1.4736	1.4687	3328	1.3361	1.3353
Eta		0.053			0.041	
Beta			0.047			0.03
<b>Urbanicity</b>						
Farm	815	1.4239	1.3947	734	1.2928	1.3022
Country	1570	1.3904	1.3878	1508	1.253	1.2734
Non SMSA	2027	1.4376	1.436	2467	1.3514	1.3425
Non S-R	7867	1.4452	1.4442	8299	1.3185	1.3175
Self-Rep	3272	1.4153	1.4271	3650	1.325	1.3228
Eta		0.03			0.049	
Beta			0.031			0.034

Table A.16, cont

Parent Ed	Males: Victimization			Females: Victimization		
	n	x	x(adj)	n	x	x(adj)
Low	1124	1.4381	1.3862	1646	1.3486	1.2841
2	3732	1.3965	1.3767	4294	1.302	1.2846
3	3972	1.4428	1.4442	4123	1.3224	1.3234
4	4225	1.4159	1.4329	4096	1.3136	1.3386
High	2498	1.4879	1.5097	2501	1.3234	1.3529
Eta		0.049			0.027	
Beta			0.071			0.054
<b>Curriculum</b>						
Coll Prep	5401	1.4243	1.4415	6514	1.3163	1.3377
General	8775	1.4271	1.4211	9455	1.313	1.3027
Vo-Tech	1374	1.4851	1.4555	691	1.3951	1.3345
Eta		0.027			0.033	
Beta			0.02			0.035
<b>Grades</b>						
D, C-	1468	1.5762	1.5677	1056	1.4513	1.421
C, C+	2976	1.4592	1.4557	2416	1.3803	1.3625
B-, B	4345	1.4281	1.4299	4162	1.3068	1.3058
B+, A-	4608	1.3807	1.3845	5803	1.2928	1.3001
A	2153	1.4083	1.4073	3221	1.2859	1.2973
Eta		0.089			0.094	
Beta			0.083			0.07
<b>Hrs Work/Week</b>						
None	8185	1.3857	1.388	9611	1.2959	1.2889
5 or less	3716	1.4318	1.4444	4223	1.3107	1.3357
6 to 10	1741	1.5048	1.5042	1700	1.3676	1.3743
11 to 15	696	1.5397	1.5163	503	1.4056	1.3851
16 to 20	568	1.5498	1.5195	285	1.405	1.3736
21 to 25	248	1.5304	1.4964	140	1.5098	1.4335
26 to 30	125	1.5671	1.5277	66	1.6331	1.5578
31+	272	1.6481	1.5824	130	1.6079	1.4917
Eta		0.101			0.097	
Beta			0.086			0.083
<b>Hrs Prefer Wrk</b>						
None	870	1.4363	1.4473	617	1.3428	1.3531
5 or less	2326	1.3571	1.3621	3328	1.2576	1.2607
6 to 10	3986	1.4039	1.4102	5400	1.2919	1.2956
11 to 15	2553	1.4164	1.4255	2748	1.3042	1.3133
16 to 20	2257	1.4604	1.4658	2021	1.3662	1.3698
21 to 25	1296	1.475	1.47	1146	1.3681	1.3578
26 to 30	844	1.4674	1.4494	649	1.3938	1.3696
31+	1419	1.5455	1.5031	749	1.5259	1.4699
Eta		0.083			0.122	
Beta			0.066			0.101
R squared	0.032			0.046		

**Table A.17. Victimization Predicted by Actual and Preferred  
Hours of Work, Background, and Educational Success: Multiple Classification  
Analyses of 10th Graders, Males and Females in the Classes of 1992-1998**

	Males: Victimization			Females: Victimization		
	n	x	x(adj)	n	x	x(adj)
<b>Base Year</b>						
1992	2482	1.3805	1.3815	2720	1.2776	1.2752
1993	2692	1.3493	1.3534	2821	1.2653	1.2672
1994	2786	1.3529	1.3533	2929	1.2557	1.2557
1995	2839	1.3837	1.3851	2959	1.2564	1.2577
1996	2672	1.38	1.3787	2742	1.2686	1.2672
1997	1826	1.381	1.3783	1868	1.2582	1.2581
1998	1732	1.3679	1.3619	1927	1.2351	1.2358
Eta		0.026			0.028	
Beta			0.024			0.026
<b>Race</b>						
Black	1465	1.4246	1.4259	1854	1.3292	1.3239
White	12743	1.3523	1.3526	13269	1.2458	1.2474
Hispanic	1348	1.388	1.3805	1433	1.2847	1.2763
Other	1473	1.4556	1.4585	1409	1.2858	1.2863
Eta		0.062			0.066	
Beta			0.063			0.06
<b>College Plans</b>						
Definitely won't	1137	1.4601	1.4215	670	1.3461	1.31
Probably won't	2006	1.4081	1.3877	1311	1.3195	1.2972
Probably will	5223	1.3752	1.3755	4507	1.2828	1.2786
Definitely will	8662	1.3467	1.3564	11477	1.2403	1.2465
Eta		0.058			0.073	
Beta			0.033			0.048
<b>Region</b>						
South	3097	1.3394	1.3442	3287	1.2357	1.2442
NE	4936	1.365	1.3691	5133	1.2449	1.247
NC	5815	1.3729	1.3683	6169	1.2723	1.2649
West	3181	1.4039	1.4011	3376	1.2875	1.2896
Eta		0.037			0.046	
Beta			0.032			0.039
<b>Urbanicity</b>						
Farm	708	1.3598	1.3563	678	1.2758	1.2831
Country	1684	1.3649	1.3676	1767	1.2708	1.2818
Non SMSA	2146	1.3719	1.3727	2535	1.2703	1.2695
Non S-R	9066	1.3698	1.3698	9282	1.2557	1.2543
Self-Rep	3425	1.3754	1.3742	3704	1.2589	1.2563
Eta		0.007			0.016	
Beta			0.007			0.024

Table A.17, cont

<b>Parent Ed</b>	<b>Males: Victimization</b>			<b>Females: Victimization</b>		
	<b>n</b>	<b>x</b>	<b>x(adj)</b>	<b>n</b>	<b>x</b>	<b>x(adj)</b>
Low	1071	1.4012	1.3506	1549	1.2886	1.2452
2	4187	1.3566	1.3347	4713	1.2471	1.2287
3	4720	1.3631	1.3591	5071	1.2698	1.2698
4	4676	1.3708	1.3906	4399	1.2523	1.2709
High	2375	1.3935	1.4241	2234	1.2657	1.2978
Eta		0.026			0.031	
Beta			0.055			0.055
<b>Curriculum</b>						
Coll Prep	8729	1.3526	1.3793	10365	1.2468	1.2619
General	6499	1.384	1.3583	6708	1.2709	1.253
Vo-Tech	1801	1.4064	1.3696	893	1.3443	1.3034
Eta		0.035			0.054	
Beta			0.018			0.026
<b>Grades</b>						
D, C-	1796	1.5091	1.4937	1185	1.3639	1.3425
C, C+	3988	1.3889	1.3867	3414	1.2853	1.2731
B-, B	5178	1.3628	1.366	5304	1.2652	1.266
B+, A-	4188	1.3261	1.3287	5423	1.2424	1.2485
A	1878	1.3172	1.3218	2640	1.2109	1.222
Eta		0.1			0.087	
Beta			0.09			0.066
<b>Hrs Work/Week</b>						
None	8631	1.3406	1.3388	10405	1.2423	1.2384
5 or less	2148	1.3751	1.3948	2494	1.2604	1.2759
6 to 10	1552	1.3992	1.4183	1644	1.2803	1.2923
11 to 15	1282	1.3734	1.3854	1107	1.2658	1.2752
16 to 20	1476	1.3917	1.3858	1179	1.3066	1.3066
21 to 25	943	1.4143	1.3989	627	1.311	1.2972
26 to 30	549	1.4837	1.4425	335	1.3878	1.3605
31+	447	1.5066	1.45	175	1.4053	1.3483
Eta		0.073			0.075	
Beta			0.064			0.071
<b>Hrs Prefer Wrk</b>						
None	851	1.426	1.4454	684	1.2638	1.2863
5 or less	1006	1.3141	1.318	1531	1.2281	1.2347
6 to 10	2809	1.3343	1.3436	3880	1.2338	1.242
11 to 15	2721	1.3398	1.3527	3567	1.2547	1.2658
16 to 20	3506	1.356	1.3616	3577	1.2519	1.2528
21 to 25	2502	1.3665	1.3637	2264	1.2759	1.266
26 to 30	1678	1.3952	1.3794	1432	1.3048	1.2851
31+	1956	1.4779	1.4432	1030	1.3645	1.3167
Eta		0.085			0.079	
Beta			0.065			0.049
R squared	0.027			0.026		

**Table A.18. Victimization Predicted by Actual Hours of Work,  
Background, and Educational Success: Multiple Classification  
Analyses of 12th Graders, Males and Females in the Classes of 1992-1998\***

	Males: Victimization			Females: Victimization		
	n	x	x(adj)	n	x	x(adj)
<b>Base Year</b>						
1992	1019	1.4967	1.4914	1085	1.3012	1.302
1993	1052	1.5201	1.5232	1080	1.3496	1.3534
1994	953	1.463	1.4644	1061	1.3302	1.3313
1995	984	1.4902	1.4892	1070	1.3422	1.3453
1996	911	1.5436	1.551	963	1.3508	1.3488
1997	938	1.5124	1.5108	1051	1.3306	1.3284
1998	953	1.5245	1.521	1058	1.3371	1.3321
Eta		0.04			0.034	
Beta			0.043			0.035
<b>Race</b>						
Black	751	1.5962	1.605	952	1.4031	1.3991
White	5128	1.4809	1.4825	5387	1.3054	1.3095
Hispanic	440	1.5796	1.5557	511	1.4185	1.3918
Other	490	1.5782	1.5696	518	1.4249	1.4158
Eta		0.076			0.104	
Beta			0.073			0.089
<b>College Plans</b>						
Definitely won't	849	1.5314	1.5047	689	1.3635	1.3466
Probably won't	832	1.4973	1.4745	812	1.3159	1.3022
Probably will	1709	1.5109	1.5043	1460	1.341	1.3253
Definitely will	3421	1.5014	1.5168	4407	1.3308	1.3412
Eta		0.017			0.025	
Beta			0.022			0.028
<b>Region</b>						
South	1116	1.4834	1.4815	1344	1.3142	1.3265
NE	1975	1.5024	1.5153	2086	1.3177	1.3324
NC	2470	1.4948	1.4905	2654	1.3374	1.3295
West	1250	1.5595	1.5492	1284	1.3757	1.3552
Eta		0.042			0.046	
Beta			0.039			0.021
<b>Urbanicity</b>						
Farm	291	1.4655	1.4713	249	1.2509	1.2709
Country	489	1.4321	1.4527	490	1.2894	1.3152
Non SMSA	1132	1.488	1.5035	1349	1.318	1.3333
Non S-R	3337	1.5221	1.5173	3436	1.3511	1.3463
Self-Rep	1561	1.5196	1.5113	1844	1.3379	1.3261
Eta		0.043			0.051	
Beta			0.03			0.034

\*Preferred work hours do not appear in this table since they are on a different form than theft measures for 12th graders.

Table A.18, cont

<b>Parent Ed</b>	<b>Males: Victimization</b>			<b>Females: Victimization</b>		
	<b>n</b>	<b>x</b>	<b>x(adj)</b>	<b>n</b>	<b>x</b>	<b>x(adj)</b>
Low	488	1.5724	1.5206	709	1.3916	1.3521
2	1637	1.4671	1.4574	1940	1.3223	1.3128
3	2066	1.5126	1.5093	2135	1.3257	1.3265
4	1701	1.4997	1.5088	1702	1.3306	1.3459
High	918	1.5445	1.5797	883	1.342	1.3633
Eta		0.05			0.042	
Beta			0.06			0.038
<b>Curriculum</b>						
Coll Prep	3723	1.4935	1.5062	4504	1.3224	1.3333
General	2358	1.5102	1.4955	2393	1.3548	1.3392
Vo-Tech	728	1.5659	1.5484	471	1.3427	1.3187
Eta		0.036			0.033	
Beta			0.025			0.011
<b>Grades</b>						
D, C-	375	1.6763	1.6727	194	1.4578	1.4351
C, C+	1418	1.5279	1.5203	987	1.3948	1.3824
B-, B	2439	1.5222	1.5257	2399	1.3334	1.3346
B+, A-	1815	1.4593	1.4589	2640	1.321	1.3212
A	763	1.4499	1.4556	1148	1.2935	1.305
Eta		0.086			0.075	
Beta			0.084			0.06
<b>Hrs Work/Week</b>						
None	1792	1.452	1.4395	1857	1.3126	1.2996
5 or less	486	1.4918	1.5018	540	1.315	1.3192
6 to 10	608	1.4412	1.4415	686	1.3037	1.3112
11 to 15	682	1.4968	1.501	950	1.2739	1.2833
16 to 20	1019	1.5035	1.5109	1293	1.3215	1.3285
21 to 25	897	1.5437	1.5547	957	1.3457	1.3521
26 to 30	590	1.5237	1.5234	609	1.4511	1.444
31+	735	1.6618	1.6581	476	1.4672	1.4604
Eta		0.105			0.119	
Beta			0.109			0.114
<b>R squared</b>	0.032			0.032		

**Table A.19. Theft Predicted by Actual and Preferred Hours of Work,  
Background, and Educational Success: Multiple Classification  
Analyses of 8th Graders, Males and Females in the Classes of 1992-1998**

	Males: Theft			Females: Theft		
	n	x	x(adj)	n	x	x(adj)
<b>Base Year</b>						
1992	2471	1.4895	1.479	2587	1.2228	1.2065
1993	2502	1.5304	1.5181	2608	1.2782	1.2705
1994	2347	1.5166	1.5094	2523	1.2839	1.2824
1995	2224	1.4981	1.5137	2409	1.2972	1.2998
1996	2341	1.5416	1.5397	2463	1.3279	1.3296
1997	2442	1.5158	1.5253	2660	1.2832	1.2904
1998	2385	1.4556	1.4642	2640	1.2686	1.2825
Eta		0.029			0.044	
Beta			0.026			0.052
<b>Race</b>						
Black	1975	1.4774	1.4564	2358	1.2408	1.2376
White	11118	1.4885	1.5009	11943	1.2588	1.2685
Hispanic	1544	1.6374	1.5938	1534	1.4113	1.3468
Other	2076	1.5365	1.5221	2055	1.3477	1.3432
Eta		0.048			0.076	
Beta			0.035			0.052
<b>College Plans</b>						
Definitely won't	797	1.8343	1.69	452	1.7793	1.6836
Probably won't	1356	1.7047	1.6241	996	1.5216	1.4511
Probably will	5020	1.5398	1.5336	4409	1.3361	1.3228
Definitely will	9541	1.4341	1.4609	12033	1.2202	1.2346
Eta		0.117			0.17	
Beta			0.07			0.132
<b>Region</b>						
South	2879	1.5266	1.5236	3201	1.2962	1.2954
NE	4507	1.4967	1.4889	4752	1.2545	1.2556
NC	5784	1.4921	1.5102	6263	1.2604	1.2722
West	3543	1.5279	1.5107	3675	1.3308	1.31
Eta		0.018			0.045	
Beta			0.013			0.03
<b>Urbanicity</b>						
Farm	815	1.383	1.355	718	1.2954	1.2681
Country	1575	1.434	1.4184	1681	1.2102	1.2127
Non SMSA	2180	1.4524	1.4538	2534	1.2089	1.2113
Non S-R	8488	1.5262	1.5237	9102	1.2981	1.2956
Self-Rep	3655	1.5535	1.5715	3856	1.3103	1.3186
Eta		0.052			0.059	
Beta			0.062			0.059

Table A.19, cont

<b>Parent Ed</b>	<b>Males: Theft</b>			<b>Females: Theft</b>		
	<b>n</b>	<b>x</b>	<b>x(adj)</b>	<b>n</b>	<b>x</b>	<b>x(adj)</b>
Low	1184	1.6261	1.483	1559	1.3742	1.2511
2	4005	1.5102	1.4482	4654	1.2888	1.2514
3	4333	1.4985	1.4977	4674	1.2911	1.2984
4	4535	1.4696	1.5237	4433	1.2407	1.2828
High	2656	1.526	1.5924	2569	1.2525	1.309
Eta		0.041			0.055	
Beta			0.05			0.034
<b>Curriculum</b>						
Coll Prep	5937	1.471	1.552	7149	1.2358	1.2944
General	9358	1.5147	1.4771	9993	1.3053	1.2696
Vo-Tech	1418	1.6053	1.5149	748	1.358	1.2753
Eta		0.039			0.056	
Beta			0.038			0.018
<b>Grades</b>						
D, C-	1557	1.989	1.9407	1060	1.6466	1.5606
C, C+	3053	1.6001	1.5995	2381	1.3737	1.3499
B-, B	4684	1.5105	1.5173	4596	1.2999	1.298
B+, A-	5042	1.3783	1.3852	6197	1.2393	1.2506
A	2376	1.3369	1.3413	3657	1.1554	1.1791
Eta		0.194			0.172	
Beta			0.179			0.133
<b>Hrs Work/Week</b>						
None	9097	1.4741	1.4764	10531	1.2716	1.2665
5 or less	3827	1.5015	1.5337	4342	1.2659	1.2986
6 to 10	1780	1.5256	1.5248	1760	1.2891	1.2813
11 to 15	750	1.6078	1.5716	600	1.2907	1.2519
16 to 20	577	1.655	1.5835	305	1.4427	1.3678
21 to 25	276	1.6187	1.5371	157	1.514	1.4606
26 to 30	152	1.8576	1.7571	91	1.5278	1.3914
31+	255	1.6645	1.5212	103	1.4057	1.3341
Eta		0.064			0.057	
Beta			0.044			0.04
<b>Hrs Prefer Wrk</b>						
None	976	1.5643	1.5672	739	1.3519	1.3276
5 or less	2460	1.4206	1.4223	3660	1.1987	1.1986
6 to 10	4336	1.4026	1.4179	5751	1.24	1.2493
11 to 15	2620	1.4923	1.5087	2977	1.3133	1.3264
16 to 20	2429	1.5661	1.5754	2203	1.3281	1.3248
21 to 25	1383	1.6097	1.5967	1160	1.381	1.3634
26 to 30	1005	1.5557	1.5312	704	1.4134	1.381
31+	1504	1.7139	1.6498	697	1.3564	1.3222
Eta		0.105			0.097	
Beta			0.087			0.086
R squared	0.059			0.064		

**Table A.20. Theft Predicted by Actual and Preferred Hours of Work,  
Background, and Educational Success: Multiple Classification  
Analyses of 10th Graders, Males and Females in the Classes of 1992-1998**

	Males: Theft			Females: Theft		
	n	x	x(adj)	n	x	x(adj)
<b>Base Year</b>						
1992	2390	1.5159	1.5079	2615	1.2202	1.2128
1993	2609	1.5106	1.5077	2790	1.2275	1.2254
1994	2696	1.5723	1.5609	2850	1.2419	1.2372
1995	2855	1.5422	1.551	2936	1.2798	1.2841
1996	2562	1.5529	1.5629	2740	1.3043	1.3118
1997	2582	1.5417	1.5452	2889	1.3026	1.3006
1998	2501	1.4745	1.4736	2826	1.2728	1.2769
Eta		0.031			0.048	
Beta			0.033			0.054
<b>Race</b>						
Black	1575	1.5192	1.4994	2044	1.2385	1.2278
White	13626	1.5188	1.5254	14385	1.2578	1.2644
Hispanic	1477	1.5986	1.5654	1677	1.325	1.2951
Other	1517	1.585	1.5784	1540	1.2986	1.2835
Eta		0.028			0.034	
Beta			0.021			0.024
<b>College Plans</b>						
Definitely won't	1160	1.7924	1.7238	758	1.5202	1.4794
Probably won't	2147	1.7071	1.6585	1475	1.357	1.3323
Probably will	5634	1.5801	1.5736	4810	1.3311	1.3202
Definitely will	9254	1.4271	1.4509	12603	1.2132	1.2227
Eta		0.125			0.117	
Beta			0.094			0.096
<b>Region</b>						
South	3301	1.5692	1.5814	3521	1.2809	1.2859
NE	5212	1.5187	1.5116	5579	1.2589	1.2527
NC	6300	1.5027	1.5174	6778	1.2437	1.255
West	3382	1.5644	1.5358	3767	1.296	1.2801
Eta		0.029			0.03	
Beta			0.026			0.021
<b>Urbanicity</b>						
Farm	820	1.366	1.3629	720	1.1855	1.2009
Country	1794	1.4439	1.4346	1978	1.2	1.205
Non SMSA	2336	1.4894	1.4852	2717	1.1944	1.1965
Non S-R	9550	1.5471	1.5444	10105	1.2781	1.2739
Self-Rep	3695	1.5936	1.6084	4126	1.3232	1.327
Eta		0.058			0.07	
Beta			0.064			0.068

Table A.20, cont

<b>Parent Ed</b>	<b>Males: Theft</b>			<b>Females: Theft</b>		
	<b>n</b>	<b>x</b>	<b>x(adj)</b>	<b>n</b>	<b>x</b>	<b>x(adj)</b>
Low	1179	1.595	1.4701	1812	1.314	1.2324
2	4409	1.5275	1.463	5117	1.239	1.2058
3	5282	1.5433	1.5344	5588	1.28	1.2797
4	4792	1.514	1.5653	4708	1.2657	1.3018
High	2533	1.5123	1.6043	2421	1.2449	1.3069
Eta		0.022			0.034	
Beta			0.051			0.061
<b>Curriculum</b>						
Coll Prep	9366	1.4693	1.5439	11153	1.23	1.2664
General	6950	1.6019	1.539	7469	1.3127	1.2691
Vo-Tech	1878	1.5744	1.4351	1024	1.2926	1.2144
Eta		0.067			0.061	
Beta			0.034			0.018
<b>Grades</b>						
D, C-	1770	1.9267	1.8547	1252	1.49	1.4284
C, C+	4340	1.6221	1.5934	3650	1.349	1.3239
B-, B	5559	1.4859	1.4882	5821	1.2825	1.2785
B+, A-	4543	1.4242	1.4545	6071	1.2054	1.2201
A	1984	1.348	1.399	2851	1.1477	1.1839
Eta		0.163			0.134	
Beta			0.128			0.096
<b>Hrs Work/Week</b>						
None	9243	1.5081	1.5157	11306	1.2427	1.2497
5 or less	2240	1.4546	1.5021	2710	1.2186	1.2484
6 to 10	1657	1.504	1.5352	1832	1.2784	1.289
11 to 15	1394	1.5845	1.5909	1214	1.313	1.2966
16 to 20	1568	1.6444	1.6066	1311	1.3553	1.2997
21 to 25	1022	1.5576	1.4976	682	1.4376	1.3691
26 to 30	562	1.5889	1.4908	357	1.3884	1.3233
31+	508	1.751	1.6298	233	1.3055	1.2357
Eta		0.065			0.078	
Beta			0.039			0.044
<b>Hrs Prefer Wrk</b>						
None	1001	1.51	1.5237	816	1.1833	1.2059
5 or less	1082	1.3814	1.4057	1721	1.1645	1.1752
6 to 10	2825	1.4384	1.4654	4210	1.174	1.191
11 to 15	2945	1.4428	1.4624	3807	1.2687	1.2752
16 to 20	3722	1.536	1.536	3984	1.3173	1.3112
21 to 25	2712	1.59	1.5816	2405	1.3349	1.3133
26 to 30	1776	1.5992	1.5758	1514	1.3192	1.2962
31+	2133	1.719	1.6674	1186	1.3869	1.3683
Eta		0.1			0.11	
Beta			0.075			0.09
R squared	0.047			0.046		

**Table A.21. Theft Predicted by Actual Hours of Work,  
Background, and Educational Success: Multiple Classification  
Analyses of 12th Graders, Males and Females in the Classes of 1992-1998\***

	Males: Theft			Females: Theft		
	n	x	x(adj)	n	x	x(adj)
<b>Base Year</b>						
1992	2036	1.5802	1.5721	2182	1.2407	1.236
1993	2129	1.5832	1.5777	2262	1.2327	1.2359
1994	1892	1.5846	1.5868	2175	1.2616	1.2585
1995	1963	1.5895	1.5888	2175	1.2673	1.2649
1996	1803	1.5981	1.6109	1992	1.2812	1.2861
1997	939	1.6417	1.6444	1054	1.3655	1.3693
1998	952	1.576	1.5754	1056	1.2954	1.2964
Eta		0.017			0.054	
Beta			0.021			0.056
<b>Race</b>						
Black	1281	1.6225	1.6178	1628	1.2483	1.2464
White	8826	1.574	1.5748	9535	1.2637	1.2647
Hispanic	793	1.6988	1.6952	866	1.3064	1.3069
Other	815	1.611	1.6132	867	1.3177	1.31
Eta		0.034			0.028	
Beta			0.033			0.026
<b>College Plans</b>						
Definitely won't	1483	1.6889	1.6363	1234	1.2952	1.2768
Probably won't	1479	1.6439	1.6012	1397	1.2758	1.258
Probably will	2988	1.6196	1.6055	2600	1.2936	1.2751
Definitely will	5764	1.5361	1.5679	7665	1.2539	1.2664
Eta		0.058			0.028	
Beta			0.025			0.008
<b>Region</b>						
South	1894	1.6335	1.6321	2367	1.3093	1.3111
NE	3450	1.6126	1.6204	3640	1.2748	1.2744
NC	4230	1.5372	1.5453	4665	1.2298	1.2401
West	2141	1.6213	1.594	2224	1.2945	1.2716
Eta		0.041			0.048	
Beta			0.037			0.039
<b>Urbanicity</b>						
Farm	526	1.518	1.5245	485	1.2163	1.237
Country	821	1.4536	1.4722	856	1.1814	1.2102
Non SMSA	2041	1.5637	1.5837	2271	1.2197	1.2385
Non S-R	5682	1.5977	1.5948	6110	1.2878	1.2814
Self-Rep	2644	1.652	1.6358	3174	1.2967	1.2847
Eta		0.052			0.058	
Beta			0.042			0.037

\*Preferred work hours do not appear in this table since they are on a different form than theft measures for 12th graders.

Table A.21, cont

<b>Parent Ed</b>	<b>Males: Theft</b>			<b>Females: Theft</b>		
	<b>n</b>	<b>x</b>	<b>x(adj)</b>	<b>n</b>	<b>x</b>	<b>x(adj)</b>
Low	829	1.6488	1.557	1246	1.2471	1.2287
2	2912	1.5766	1.5516	3319	1.2587	1.2471
3	3531	1.5907	1.5844	3845	1.2695	1.2644
4	2933	1.5975	1.619	3005	1.2789	1.2905
High	1510	1.5699	1.6416	1481	1.2826	1.3136
Eta		0.019			0.017	
Beta			0.032			0.039
<b>Curriculum</b>						
Coll Prep	6282	1.5405	1.5865	7886	1.2502	1.2642
General	4132	1.6521	1.6025	4167	1.3048	1.2817
Vo-Tech	1300	1.6348	1.5702	842	1.2566	1.2397
Eta		0.055			0.039	
Beta			0.01			0.017
<b>Grades</b>						
D, C-	603	2.1089	2.0823	333	1.5318	1.5297
C, C+	2560	1.6919	1.677	1801	1.3442	1.345
B-, B	4233	1.5718	1.5705	4226	1.3003	1.2994
B+, A-	3077	1.4962	1.5038	4593	1.2265	1.2248
A	1242	1.4256	1.4546	1942	1.1816	1.1873
Eta		0.149			0.106	
Beta			0.138			0.105
<b>Hrs Work/Week</b>						
None	3052	1.5221	1.5221	3294	1.2125	1.2141
5 or less	813	1.4748	1.5041	929	1.2268	1.2432
6 to 10	994	1.5404	1.5547	1172	1.1795	1.1819
11 to 15	1185	1.591	1.597	1649	1.2875	1.2942
16 to 20	1782	1.6399	1.645	2232	1.2992	1.2956
21 to 25	1552	1.6343	1.6293	1691	1.3361	1.3296
26 to 30	1101	1.6377	1.6193	1070	1.3423	1.3348
31+	1236	1.7055	1.6844	859	1.3044	1.2961
Eta		0.069			0.085	
Beta			0.06			0.079
<b>R squared</b>	0.031			0.027		

**Table A.22. Seven or More Hours of Sleep Predicted by Actual and Preferred Hours of Work, Background, and Educational Success: Multiple Classification Analyses of 8th Graders, Males and Females in the Classes of 1992-1998**

	Males: 7+ Hours Sleep/Night			Females: 7+ Hours Sleep/Night		
	n	x	x(adj)	n	x	x(adj)
<b>Base Year</b>						
1992	2412	4.887	4.8999	2517	4.6581	4.6847
1993	2465	4.9224	4.9276	2564	4.6489	4.6662
1994	2298	4.774	4.7757	2468	4.6368	4.6349
1995	2166	4.8972	4.8819	2354	4.6482	4.6522
1996	2320	4.8605	4.882	2427	4.6073	4.6009
1997	1571	4.8474	4.8285	1680	4.5587	4.5363
1998	1534	4.7063	4.6837	1693	4.4632	4.426
Eta		0.048			0.042	
Beta			0.053			0.055
<b>Race</b>						
Black	1772	4.8075	4.8551	2075	4.602	4.6262
White	9872	4.8958	4.8763	10502	4.6419	4.629
Hispanic	1324	4.7255	4.7971	1326	4.452	4.5439
Other	1797	4.7293	4.7368	1801	4.5688	4.5489
Eta		0.05			0.039	
Beta			0.034			0.023
<b>College Plans</b>						
Definitely won't	713	4.0923	4.2684	392	4.0204	4.2265
Probably won't	1221	4.5042	4.5834	876	4.0516	4.1973
Probably will	4459	4.7189	4.7197	3827	4.4453	4.4671
Definitely will	8372	5.0342	5.0072	10607	4.7407	4.7132
Eta		0.179			0.15	
Beta			0.146			0.113
<b>Region</b>						
South	2514	4.8694	4.8593	2832	4.5898	4.5714
NE	4049	4.8557	4.8561	4209	4.5831	4.5697
NC	5093	4.7905	4.7724	5459	4.6124	4.6125
West	3109	4.9228	4.9602	3202	4.6701	4.7039
Eta		0.035			0.023	
Beta			0.049			0.036
<b>Urbanicity</b>						
Farm	732	4.8085	4.8514	653	4.6749	4.6931
Country	1416	4.88	4.9622	1503	4.6458	4.6607
Non SMSA	1922	4.9117	4.9529	2194	4.6895	4.7051
Non S-R	7521	4.8392	4.8255	8024	4.5728	4.5677
Self-Rep	3175	4.8329	4.7938	3328	4.629	4.6208
Eta		0.02			0.032	
Beta			0.043			0.037

Table A.22, cont

	<b>Males: 7+ Hours Sleep/Night</b>			<b>Females: 7+ Hours Sleep/Night</b>		
<b>Parent Ed</b>	<b>n</b>	<b>x</b>	<b>x(adj)</b>	<b>n</b>	<b>x</b>	<b>x(adj)</b>
Low	1056	4.5856	4.8124	1378	4.3685	4.5626
2	3550	4.7581	4.8702	4132	4.5719	4.6512
3	3809	4.8688	4.8632	4105	4.5865	4.5782
4	4023	4.9615	4.8736	3860	4.7307	4.6521
High	2327	4.8845	4.7717	2228	4.6803	4.5643
Eta		0.074			0.071	
Beta			0.026			0.029
<b>Curriculum</b>						
Coll Prep	5275	4.9614	4.8173	6329	4.6959	4.579
General	8229	4.7986	4.8645	8690	4.5549	4.6264
Vo-Tech	1261	4.7155	4.8884	683	4.5671	4.7398
Eta		0.062			0.049	
Beta			0.018			0.025
<b>Grades</b>						
D, C-	1418	4.3039	4.4892	927	3.9396	4.1064
C, C+	2682	4.6674	4.7218	2087	4.3726	4.4316
B-, B	4162	4.8302	4.8255	4048	4.5944	4.6016
B+, A-	4440	5.0586	5.0039	5465	4.7159	4.6909
A	2063	5.0515	4.9807	3176	4.8103	4.7567
Eta		0.166			0.153	
Beta			0.114			0.115
<b>Hrs Work/Week</b>						
None	7842	4.8722	4.8716	9020	4.6013	4.6178
5 or less	3481	4.8878	4.8463	3929	4.6936	4.6403
6 to 10	1619	4.8631	4.8685	1606	4.5378	4.5158
11 to 15	683	4.7668	4.7993	539	4.6292	4.6718
16 to 20	531	4.7663	4.837	286	4.4206	4.5269
21 to 25	257	4.5048	4.6129	146	4.562	4.6313
26 to 30	138	4.2914	4.4065	79	4.0255	4.2619
31+	213	4.5484	4.7207	97	4.5926	4.7305
Eta		0.062			0.049	
Beta			0.042			0.033
<b>Hrs Prefer Wrk</b>						
None	748	4.6935	4.6866	583	4.3174	4.3329
5 or less	2150	4.8776	4.8608	3125	4.68	4.6595
6 to 10	3835	4.9273	4.8988	5124	4.6829	4.6688
11 to 15	2349	4.9189	4.876	2619	4.6497	4.6288
16 to 20	2199	4.8873	4.878	1966	4.5594	4.5859
21 to 25	1239	4.7618	4.8016	1032	4.4703	4.5057
26 to 30	891	4.7682	4.827	633	4.5033	4.5725
31+	1354	4.6244	4.7501	621	4.3206	4.4009
Eta		0.07			0.076	
Beta			0.042			0.06
R squared	0.056			0.045		

**Table A.23. Seven or More Hours of Sleep Predicted by Actual and Preferred Hours of Work, Background, and Educational Success: Multiple Classification Analyses of 10th Graders, Males and Females in the Classes of 1992-1998**

	Males: 7+ Hours Sleep/Night			Females: 7+ Hours Sleep/Night		
	n	x	x(adj)	n	x	x(adj)
<b>Base Year</b>						
1992	2353	4.5974	4.5888	2586	4.2582	4.252
1993	2579	4.5397	4.5385	2767	4.1712	4.1685
1994	2667	4.4525	4.4675	2822	4.1751	4.1799
1995	2830	4.4847	4.4816	2915	4.1086	4.1118
1996	2545	4.4993	4.4972	2719	4.0548	4.0491
1997	1635	4.3738	4.3739	1906	3.9959	4.0005
1998	1660	4.2778	4.2762	1866	3.9503	3.9542
Eta		0.063			0.067	
Beta			0.061			0.065
<b>Race</b>						
Black	1387	4.3849	4.4158	1813	4.2131	4.2602
White	12266	4.4976	4.4968	12918	4.1205	4.1129
Hispanic	1267	4.4679	4.4647	1480	4.0787	4.0824
Other	1348	4.3624	4.3409	1369	3.9571	3.9619
Eta		0.032			0.039	
Beta			0.032			0.045
<b>College Plans</b>						
Definitely won't	1030	4.0162	4.1214	689	3.6221	3.6923
Probably won't	1921	4.1829	4.2187	1327	3.883	3.8997
Probably will	5000	4.4547	4.4399	4322	4.0323	4.0296
Definitely will	8316	4.6105	4.5981	11242	4.2025	4.1973
Eta		0.127			0.099	
Beta			0.108			0.09
<b>Region</b>						
South	2947	4.4659	4.4419	3132	4.1367	4.1351
NE	4712	4.4272	4.4355	4995	4.1012	4.1178
NC	5605	4.4342	4.428	6066	4.0854	4.0624
West	3004	4.6322	4.6542	3387	4.162	4.1802
Eta		0.053			0.021	
Beta			0.06			0.03
<b>Urbanicity</b>						
Farm	754	4.5461	4.5996	668	4.2101	4.2155
Country	1586	4.563	4.6117	1738	4.2386	4.2584
Non SMSA	2109	4.585	4.5858	2472	4.2623	4.2574
Non S-R	8610	4.451	4.4438	9124	4.0753	4.0793
Self-Rep	3208	4.4043	4.3863	3577	4.0307	4.0131
Eta		0.043			0.059	
Beta			0.055			0.063

Table A.23, cont

Parent Ed	Males: 7+ Hours Sleep/Night			Females: 7+ Hours Sleep/Night		
	n	x	x(adj)	n	x	x(adj)
Low	1028	4.2368	4.3696	1591	4.0261	4.153
2	3947	4.4802	4.5718	4591	4.1315	4.1884
3	4700	4.4994	4.5056	5023	4.1009	4.0973
4	4337	4.504	4.4373	4211	4.1212	4.0606
High	2254	4.464	4.3585	2164	4.1562	4.0684
Eta		0.044			0.023	
Beta			0.052			0.036
<b>Curriculum</b>						
Coll Prep	8406	4.5476	4.4411	9983	4.1429	4.0729
General	6216	4.4157	4.4977	6656	4.088	4.1692
Vo-Tech	1645	4.3228	4.5571	942	3.9876	4.1557
Eta		0.056			0.028	
Beta			0.027			0.033
<b>Grades</b>						
D, C-	1613	3.9919	4.116	1125	3.7089	3.8162
C, C+	3908	4.3609	4.4013	3264	3.9917	4.0299
B-, B	4941	4.5782	4.5631	5237	4.1297	4.1315
B+, A-	4046	4.6298	4.5853	5432	4.2056	4.1813
A	1759	4.5208	4.4618	2522	4.2215	4.1729
Eta		0.132			0.093	
Beta			0.098			0.066
<b>Hrs Work/week</b>						
None	8192	4.5612	4.556	10040	4.2033	4.19
5 or less	2021	4.5574	4.5028	2472	4.2202	4.1686
6 to 10	1519	4.5279	4.489	1656	4.0473	4.0368
11 to 15	1257	4.4236	4.4247	1106	3.9729	4.0035
16 to 20	1447	4.3055	4.3413	1179	3.8176	3.9101
21 to 25	904	4.2419	4.298	622	3.5955	3.7111
26 to 30	489	4.0613	4.1765	308	3.5209	3.6612
31+	438	3.9309	4.0487	197	3.9021	4.0064
Eta		0.108			0.121	
Beta			0.084			0.092
<b>Hrs Prefer Wrk</b>						
None	828	4.4162	4.3772	684	4.275	4.2248
5 or less	951	4.5777	4.5197	1506	4.3277	4.2747
6 to 10	2537	4.6193	4.5461	3763	4.2591	4.2033
11 to 15	2689	4.5457	4.4844	3445	4.1164	4.0992
16 to 20	3363	4.5084	4.4941	3611	4.0207	4.0355
21 to 25	2420	4.4192	4.4368	2155	4.0294	4.0922
26 to 30	1601	4.3859	4.4807	1369	3.9301	4.0072
31+	1878	4.2363	4.3917	1047	3.9051	3.99
Eta		0.08			0.092	
Beta			0.035			0.061
R squared	0.048			0.041		

**Table A.24. Seven or More Hours of Sleep Predicted by Actual Hours of Work,  
Background, and Educational Success: Multiple Classification  
Analyses of 12th Graders, Males and Females in the Classes of 1992-1998\***

	Males: Sleep			Females: Sleep		
	n	x	x(adj)	n	x	x(adj)
<b>Base Year</b>						
1992	848	4.0788	4.0715	979	3.8665	3.8363
1993	858	4.1392	4.12	950	3.8235	3.7923
1994	825	3.9205	3.9137	940	3.6344	3.6528
1995	827	3.9362	3.9578	955	3.7372	3.7635
1996	766	3.8194	3.8057	846	3.6038	3.5901
1997	777	3.8787	3.8784	940	3.6696	3.6807
1998	819	3.7961	3.8219	905	3.5847	3.6046
Eta		0.082			0.073	
Beta			0.077			0.063
<b>Race</b>						
Black	574	3.8302	3.8407	765	3.877	3.897
White	4394	3.9836	3.9888	4865	3.6895	3.6929
Hispanic	356	3.8247	3.7943	436	3.7445	3.6931
Other	397	3.7491	3.7031	448	3.5571	3.5366
Eta		0.053			0.052	
Beta			0.062			0.057
<b>College Plans</b>						
Definitely won't	692	3.7722	3.8985	594	3.7444	3.7356
Probably won't	662	3.779	3.8935	697	3.743	3.7514
Probably will	1381	3.9081	3.909	1261	3.5393	3.5549
Definitely will	2986	4.0332	3.9782	3963	3.747	3.7419
Eta		0.073			0.059	
Beta			0.026			0.053
<b>Region</b>						
South	841	3.9556	3.9413	1080	3.6823	3.7032
NE	1693	3.9163	3.8986	1873	3.6584	3.6631
NC	2077	3.9054	3.9105	2386	3.714	3.6795
West	1110	4.0396	4.0679	1176	3.7879	3.8314
Eta		0.035			0.032	
Beta			0.043			0.043
<b>Urbanicity</b>						
Farm	258	4.0693	4.153	236	3.8739	3.9028
Country	434	3.971	3.9979	448	3.8289	3.8084
Non SMSA	987	4.0011	3.9944	1212	3.8511	3.8317
Non S-R	2748	3.9281	3.9211	2999	3.6779	3.6874
Self-Rep	1294	3.8915	3.8858	1619	3.5915	3.5899
Eta		0.031			0.07	
Beta			0.042			0.066

\*Preferred work hours do not appear in this table since they are on a different form than theft measures for 12th graders.

Table A.24, cont

<b>Parent Ed</b>	<b>Males: Sleep</b>			<b>Females: Sleep</b>		
	<b>n</b>	<b>x</b>	<b>x(adj)</b>	<b>n</b>	<b>x</b>	<b>x(adj)</b>
Low	384	3.8903	4.0863	609	3.7661	3.7591
2	1346	3.945	4.0087	1660	3.6546	3.6746
3	1711	3.8916	3.9102	1891	3.7084	3.7203
4	1466	3.9611	3.9044	1535	3.7262	3.7176
High	814	4.0332	3.8984	820	3.7231	3.6766
Eta		0.032			0.024	
Beta			0.04			0.019
<b>Curriculum</b>						
Coll Prep	3222	4.0324	3.9643	4058	3.7085	3.6848
General	1909	3.8771	3.9433	2064	3.7042	3.7435
Vo-Tech	589	3.6579	3.8161	393	3.6921	3.7302
Eta		0.082			0.003	
Beta			0.03			0.02
<b>Grades</b>						
D, C-	293	3.26	3.3532	141	3.4924	3.4714
C, C+	1131	3.8774	3.944	841	3.6713	3.686
B-, B	2037	3.9913	3.9942	2083	3.6525	3.6633
B+, A-	1559	4.0207	3.9891	2386	3.7585	3.7644
A	700	4.0138	3.929	1065	3.7494	3.7064
Eta		0.115			0.042	
Beta			0.096			0.04
<b>Hrs Work/Week</b>						
None	1519	4.1598	4.1602	1641	4.0077	3.988
5 or less	413	4.1689	4.1407	479	3.9606	3.9425
6 to 10	534	4.1863	4.1578	625	3.8195	3.8175
11 to 15	565	4.0772	4.0642	856	3.7983	3.7964
16 to 20	862	4.0183	3.9965	1126	3.6046	3.6147
21 to 25	735	3.8175	3.8096	841	3.4423	3.4641
26 to 30	499	3.4412	3.4869	532	3.3445	3.3594
31+	595	3.3443	3.4039	415	3.1335	3.1482
Eta		0.201			0.193	
Beta			0.185			0.183
<b>R squared</b>	0.064			0.054		



## Appendix B

### Descriptions and Coding of Outcome Variables

#### Substance Use

- Cigarettes “How frequently have you smoked cigarettes during the past 30 days?” 1 = *not at all* to 7 = *2+ pack/day*
- Alcohol “On how many occasions have you had alcoholic beverages to drink—more than just a few sips during the last 30 days?” 1 = *0 occasions* to 7 = *40 or more*
- Heavy Drinking “Think back over the last 2 weeks. How many times have you had five or more drinks in a row?” 1 = *none* to 6 = *10+ times*
- Marijuana/Hashish “On how many occasions (if any) have you used marijuana (grass, pot) or hashish (hash, hash oil) during the last 30 days?” 1 = *0 occasions* to 7 = *40 or more*

#### Problem Behavior

- Aggression Average of three items concerning frequency of aggression towards others in past year (alphas = .80, .76, .83)<sup>i</sup> ranging from 1 = *none* to 5 = *5 or more times*
- Victimization Average of four items concerning frequency of personal and property violations in past year (alpha = .66, .65, .74), ranging from 1 = *none* to 5 = *5 or more times*
- Theft Average of two items concerning frequency of taking something not belonging to respondent in past year (alpha = .67, .66, .76), ranging from 1 = *none* to 5 = *5 or more times*

#### 7 Hours' Sleep

- “How often do you get at least seven hours of sleep?” 1 = *never* to 6 = *every day*

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<sup>i</sup> Alphas are for 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> grade, respectively.



Appendix C. High School Seniors (1992-1998): Where Their Earnings Went  
(Entries are Percentages)

	Males	Females
Please think about all the money you earned during the past year, including last summer. About how much of your past year's earnings have gone into:		
A. Savings for your future education		
None	50.0	49.6
A little	22.0	20.6
Some	18.5	19.8
Most	9.5	10.1
<i>N</i>	7015	7994
B. Savings or payments for a car or car expenses?		
None	36.2	47.1
A little	17.2	16.4
Some	29.9	23.7
Most	16.8	12.8
<i>N</i>	6989	7975
C. Other savings for long-range purposes?		
None	45.6	46.8
A little	25.6	22.7
Some	20.5	21.4
Most	8.3	9.1
<i>N</i>	6983	7955
D. Spending on your own needs and activities--things such as clothing, stereo, TV, tapes and discs, other possessions, movies, eating out, other recreation, hobbies, gifts for others, and other personal expenses?		
None	6.7	5.6
A little	18.8	18.4
Some	36.1	34.3
Most	38.3	41.7
<i>N</i>	6992	7973
E. Helping to pay family living expenses (groceries, housing, etc.)?		
None	56.5	54.5
A little	25.1	23.5
Some	12.7	14.9
Most	5.6	7.1
<i>N</i>	6947	7957