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Paper 78

WHAT DO TEENAGERS DO WITH THEIR EARNINGS, AND DOES IT MATTER FOR THEIR ACADEMIC ACHIEVEMENT AND DEVELOPMENT?

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Monitoring the Future: A Continuing Study of the Lifestyles and Values of Youth

As its title suggests, this study is intended to assess the changing lifestyles, values, and preferences of American youth on a continuing basis. Each year since 1975, about 17,000 seniors have participated in the annual survey, which is conducted in some 130 high schools nationwide. Since 1991, the study's annual surveys also have included surveys of similar nationally representative samples of eighth and tenth grade students. In addition, subsamples of seniors from previously participating classes receive follow-up questionnaires by mail each year.

This Occasional Paper Series is intended to disseminate a variety of products from the study, including pre-publication (and somewhat more detailed) versions of journal articles, other substantive articles, and methodological papers.

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The mailing address of Monitoring the Future is Institute for Social Research, The University of Michigan, P. O. Box 1248, Ann Arbor, MI 48106.

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EXECUTIVE SUMMARY

Most teenagers in the United States spend some time during the school year in paid employment. Although there may be many reasons for working part-time during the school year, certainly one of the most important is the money that is earned. This occasional paper examines three decades of nationwide data from the Monitoring the Future surveys of high school seniors (more than 49,000 respondents from the classes of 1981-2011) to address three broad questions: First, what do students who are employed during the school year do with their earnings, and has that changed much in recent years? Second, are different uses of earnings linked with different person characteristics? Third, does saving for college "protect" high school students from possible negative consequences of working long hours in a paid job?

Prior research on youth employment and earnings. Many studies have shown that working long hours on a paid job during the school year tends to be correlated with poorer grades, lower college aspirations and attendance, and higher substance use and other problem behaviors. The researchers involved in these studies tend to agree that substantial portions of these correlations represent "selection effects" – different individuals select, and/or are selected for, long hours of paid work during the school year. In other words, some negative factors associated with high work intensity are not really *consequences*, but instead are attributable to prior more fundamental causes. Although there is general agreement that selection effects are important, questions remain as to whether long hours of employment during the school year are also a *causal* factor, further contributing to student problems.

Somewhat less research has focused on what teenagers do with their earnings, and particularly whether different saving and spending patterns may have different consequences.

What do young people do with their earnings, and has that been changing? Most high school seniors spend most of their earnings on clothing, music, hobbies, and leisure activities. Spending on cars comes in second, especially among males. Saving for future education or contributing to help out family needs rank a good deal lower. Over the last three decades there have been only modest changes in these uses of earnings. It remains true that most high school students use the bulk of their earnings for "discretionary" spending.

Are different uses of earnings linked with different person characteristics? Teens who save more for future education are likely to have higher grades, greater college plans, and lower rates of substance use; they are also less likely to work long hours on a paid job during the school year. Those who spend more heavily on cars tend to have slightly lower grades and college plans, and are slightly more likely to report substance use; however, when background factors are controlled statistically, these relations largely disappear. Investing earnings in cars

tends to go hand in hand with spending long hours in paid jobs during the school year. Although high levels of discretionary spending are not associated with longer hours in school-year employment, they are (not surprisingly) linked to more frequent evenings out for fun and recreation and also to higher scores on a scale measuring materialism. Those who contribute more of their earnings toward family needs tend to have lower grades and college plans; they score poorer than average on measures of self-esteem, locus of control, and loneliness; but they do not differ much from average in substance use.

Does saving for college "protect" high school students from possible negative consequences of working long hours in a paid job? Although teens who save more for college are better off in terms of grades, college plans, and substance use, those college savers who work long hours while in high school are less well off than those who work 15 hours per week or less. Moreover, follow-up surveys of Monitoring the Future participants showed that patterns evident when they were high school seniors continued in their early twenties and on to ages 29-30. Among those who saved about half or more of their earnings for college, those who worked long hours in 12th grade still showed distinctly lower rates of college completion than those who worked relatively few hours. They were also more likely to be cigarette smokers in high school, and that pattern remained even a dozen years later.

We find, like other researchers, that those teenagers who work for pay during the school year and save about half or more of their earnings for college are better off than fellow student workers who save less or none of their earnings for college. But it seems likely that such differences primarily reflect *selection*. Nevertheless, the research findings clearly indicate that saving for college does not "protect" against *possible negative consequences* of working long hours on a job during the school year. We thus conclude that students who plan to save most of their earnings for college should be commended, but should still be encouraged to avoid spending long hours in employment during the school year.

Contents

INTRODUCTION

Why do teenagers work?–for the money, stupid! At least that is what many economists would say – not to mention the teenagers themselves. But it has also been argued by developmental psychologists and other social scientists (see recent reviews by Mortimer, 2010; Staff, Messersmith, & Schulenberg, 2009) that getting into the "real" world of work may provide lots of other valuable experiences besides learning how to earn (and spend!) a paycheck. Teenagers would interact with older adults who could serve as role models and vocational mentors, facilitating the transition from school to work. Work could foster "soft skills" that are valued by employers such as punctuality, courtesy, and responsibility (Coleman et al., 1974). Young workers could also learn how to better balance competing obligations to work and school that may have long-term benefits to educational attainment (Staff & Mortimer, 2007). Instead of spending their paychecks on themselves (i.e., buying clothes, music, fast food, or leisure activities), teenagers could also use their earnings to help with household and school expenses or save their money for college. In any case, and for whatever mixes of motives, before the end of high school, most teenagers have engaged in paid part-time employment during the school year (U.S. Department of Labor, 2000; National Research Council, 1998), although the percentage of employed students has appreciably declined in recent years (Bachman, Staff, O'Malley, Schulenberg, & Freedman-Doan, 2011; Bachman, Staff, O'Malley, & Freedman-Doan, 2013a).

Scholars have long expressed concern that such rewarding part-time employment experiences for U.S. teenagers are rare (Greenberg & Steinberg, 1986; Steinberg & Cauffman, 1995). It is alleged that youth typically work in the worst types of jobs that offer no experiences for learning and mentorship from adults. In addition, working for pay takes time away that youth could spend in more developmentally beneficial activities, such as doing school work, volunteering, or participating in extracurricular activities, and instead contributes to problem behaviors (e.g., drinking alcohol, smoking cigarettes, stealing from employers). Furthermore, it is argued that employed teenagers are unlikely to use their money for schooling or give their parent(s) money for household expenses. Instead, they use most of their earnings for leisure spending. If paid work poses unacceptable risks to academic achievement and development (as some have claimed), and the earnings are typically used only for leisure spending, then perhaps teenagers should wait to work until they are older and finished with school.

Teenage part-time employment during the school year has been going on for a long time, and during that time much research has been done, with many studies revealing that long hours of work (during the school year) are associated with low academic achievement and other problem behaviors (Apel et al., 2007; Bachman & Schulenberg, 1993; Bachman, Safron, Sy, & Schulenberg,2003; Bachman, Staff, et al., 2011; Bachman et al., 2013a; D'Amico, 1984; Greenberger & Steinberg, 1986; Marsh, 1991; Marsh & Kleitman, 2005; Mortimer, 2003; Osgood, 1999; Paternoster, Bushway, Brame, & Apel, 2003; Safron, Schulenberg, & Bachman,

2001; Schoenhals, Tienda, & Schneider, 1998; Staff, Osgood, Schulenberg, Bachman, & Messersmith, 2010; Staff, Schulenberg, & Bachman, 2010; Staff & Uggen, 2003; Warren, LePore, & Mare, 2000). But questions remain as to whether these associations provide evidence that long work hours *cause* the students' problems, or merely indicate that problem-prone students are likely to *choose* (or be chosen for) long work hours. In other words, do these associations merely reflect selection effects, with no "negative added value" attributable to the long work hours? That controversy has gone on for several decades now, generating some light – but also a good deal of heat. The present study may contribute a bit of additional light; however, our primary focus in this report is on the less-studied question of what teenagers do with their earnings, and whether any of the different ways teenagers use their earnings from paid work (i.e., to save for education, to help with family expenses, to spend on personal items and leisure activities) moderate the deleterious effects of high work intensity.

An early exploration, using data from the Monitoring the Future (MTF) project, showed that teenagers devoted much of their earnings to spending on their own needs (clothing, music, hobbies, gifts for others, and other possessions and personal expenses) and leisure activities (movies, eating out, etc.), a high level of discretionary spending that was characterized as "premature affluence" (Bachman, 1983). Since that publication, surprisingly little research has addressed whether non-essential spending by employed teenagers is good or bad for adolescent development. Now, three decades later, we are able to examine the same MTF questions in much greater detail. Looking at high school seniors who work for pay during the school year, we focus on their reports of how they use their earnings, how their spending patterns have changed over the years, and how the spending patterns relate to short-and longer-term educational achievement and adjustment; cigarette, alcohol, and other substance use; as well as a variety of other possible outcomes. We also consider to what extent these findings differ by gender, race/ethnicity, and socioeconomic status.

Prior Research on Youth Employment and Earnings

What teenagers do with their earnings is obviously a matter of great interest to those for whom the youth market has become increasingly lucrative. What teenagers do with their earnings is relevant also for social scientists who study academic achievement and the psychosocial development of youth. In particular, a number of studies have shown that problem behaviors and low academic accomplishments are associated with long work hours during the school year. In addition, teenagers who spend long hours on the job during high school show diminished educational attainment, as well as higher rates of smoking, in young adulthood.

These negative associations have been shown with cross-sectional and longitudinal datasets using both community and nationally-representative samples (studies cited above).

Other research has suggested that these negative effects of high work intensity may also vary by socioeconomic background characteristics. For instance, it has been argued that paid work, even at high intensities, may not be developmentally or academically harmful for all teenagers, especially disadvantaged youth who face greater obstacles in finding work or who work for different reasons than their more advantaged counterparts. Ethnographic as well as quantitative studies of poor urban youth find that paid work in adolescence can serve a valuable form of human capital development, especially among youth who have little interest in school (Entwisle, Alexander, & Olson, 2000, 2005; Farkas, Olsen, & Stromsdorfer, 1981; Farkas, Smith, & Stromsdorfer, 1983; Newman, 1999; Sullivan, 1989). Studies have also found that the harmful effects of high work intensity are not apparent among minority youth (Johnson, 2004) and that moderate work may be especially beneficial in the long term for youth from low SES backgrounds (Staff and Mortimer, 2008). Similarly, Lee and Staff (2007) found that high intensity work had little effect on the probability of high school dropout among youth who were especially likely to spend long hours on the job (i.e., boys from disadvantaged backgrounds). Rocheleau and Swisher (2012) found that work intensity actually related negatively to alcohol use among students in single-parent families. A recent study using MTF data found that work intensity showed little correlation with GPA and substance use among African American and Hispanic students, and also that such correlations were strongest among the highest SES students (Bachman, Staff, O'Malley & Freedman-Doan, 2013a,b).

As mentioned before, it seems worthwhile to examine whether certain uses of earnings may reduce these negative links with high student work intensity, especially for disadvantaged youth who may be more likely to use their earnings for "non-leisure" spending (i.e., for school and family). In particular, if it turns out that teens who save most of their earnings for college show little or no negative correlates with high levels of work intensity during the school year, then perhaps such long hours of employment need not be discouraged among these youth. On the other hand, the negative links with high work hours might be stronger among teenagers who use most of their earnings for discretionary purposes.

This Occasional Paper is divided into multiple parts. The first part examines a number of different ways that teenagers use their earnings, noting to what extent these patterns of use have changed (or not) over three decades. Earlier analyses of MTF data revealed a number of differences across socioeconomic status levels and racial/ethnic subgroups of students in terms of student part-time work during the school year and its correlates (Bachman et al., 2013a,b).

Accordingly, in most of these analyses we also examine differences by family socioeconomic level and race/ethnicity.

The second part of the paper examines how grades in school, college plans, substance use, and several personality characteristics may be related to how students use their earnings. Are those who save large portions of their earnings for college more scholarly? – do they get higher grades? –are they higher in self-esteem? What about those who use their earnings mostly for "discretionary spending" – perhaps on things that their parents would be unwilling or unable to provide (such as expensive clothing, electronic gear, and other possessions; or possibly cigarettes, alcohol, and other substances); are they likely to score higher on measures of "materialism," and are they more likely to engage in substance use? What about those students who contribute substantial portions of their earnings for family support; how do they differ from their classmates? We address these kinds of questions using fairly straightforward descriptive analyses.

The third part of the paper addresses a more subtle set of questions that involve interactions. Are certain uses of earnings likely to make high work intensity during the school year less costly or damaging, especially in terms of academic accomplishments or substance use? Put another way, does working and saving toward certain goals "protect" against what might otherwise be the costs of high work intensity? For example, if students are using their earnings primarily to help out the family, or to save for college, might that tend to mitigate any negative effects of working long hours on a job? What about students who spend substantial portions of their earnings on buying or maintaining a car? How about students whose earnings are used mostly for "spending on themselves"?

A Special Focus on Saving for Future Education

If teenagers work for pay during the school year, are they better off if they save most of their earnings for college? Although we examine a number of different ways that students spend their earnings, we focus particular attention on saving for future education (that is, college, for most). It has been suggested that students saving most of their earnings for college may be less likely to suffer negative effects of paid employment during the school year. Working youth, even when they are spending long hours on the job, may be able to maintain good grades and high college aspirations if they are using their earnings to further their education. Youth will also have less money to spend on cigarettes, alcohol, and illicit drugs if they are saving a good portion of their earnings for college. Of course, high achieving and more planful youth are likely to have high educational aspirations and hence to work to save money for college, so any observed relationship may reflect selection influences. Marsh and Kleitman (2005), using longitudinal data

from the National Education Longitudinal Survey of 1988, found that students who saved money for their future education had higher educational aspirations, performed better in school, were more involved in extracurricular activities, had fewer "bad habits" (e.g., substance use), and had higher levels of educational attainment. However, it is important to note that in the Marsh and Kleitman analysis this positive effect of saving for college was additive – i.e., it did not interact with hours worked. In other words, those college savers working long hours still appeared less well off than the college savers who worked relatively few hours. This is a matter to which we return in the Discussion.

There are a number of reasons why high school students saving a good deal of their earnings for college might be better off than their classmates; these prompt several hypotheses (not mutually exclusive). Hypotheses 1 and 2 apply to the second (descriptive) portion of the paper; Hypotheses 3 and 4 involve the third portion (testing for possible interactions).

Hypothesis 1: Students who save much of their earnings for college are less likely to work long hours. Working long hours during the school year competes with time for studies; students who expect to go on to college are motivated to get good grades and become prepared to do college work, so they are therefore less likely to be willing to work long hours (even in spite of the need to save money for college).

Hypothesis 2: Students saving for college are *generally* more likely to have good grades and avoid substance use. Much research has shown that high school students planning for college get higher than average grades and are less likely to be involved in substance use or other deviant behaviors. So quite apart from overall differences in work intensity (Hypothesis 1), it is expected that college savers will be less involved in problem behaviors than those not saving for college.

Hypothesis 3: Among students saving much of their earnings for college, working long hours on the job is less likely to be negatively correlated with grade point averages (GPA). One rationale underlying this hypothesis is that students saving much of their earnings for college are heavily invested in preparing for further education, thus those of them working long hours on the job are less likely to allow those long hours to encroach on their high school studies (and would instead sacrifice other activities that might compete for their time).

Hypothesis 4: Among students saving much of their earnings for college, working long hours on the job is less likely to be correlated (positively) with smoking, drinking, and use of illicit drugs. One of the explanations offered for higher levels of substance use among students who work long hours is that they have more money at their disposal, and having such funds makes it easier to purchase cigarettes, alcohol, and drugs. Student workers who save much

of their earnings for college presumably would have fewer funds available as "disposable income" for such purchases.

We also considered a fifth hypothesis: **Any negative correlates of high work intensity among college savers are likely to be more pronounced among those at higher SES levels (i.e., those with more highly educated parents).** This hypothesis derives from other recent research with MTF data showing that, in general, negative correlates with work intensity are more pronounced among high SES students (Bachman et al., 2013a,b). Preliminary analyses confirmed our earlier findings that negative links with high work intensity were stronger among students with more highly educated parents; however, these links were just about equally strong whether they did or did not save large portions of their earnings for higher education. Accordingly, we rejected this fifth hypothesis.

METHOD

Samples

High school senior sample. The analyses reported here are based primarily on the MTF questionnaires administered to high school seniors (modal age 18) in the years 1981-2011. Each year, MTF surveys students in public and private high schools throughout the 48 contiguous United States. A multistage random sampling procedure is used, with weighting to ensure that results are representative of U.S. high school seniors. Sample and data collection details are available elsewhere (e.g., Bachman, O'Malley, Johnston, & Schulenberg, 2011; Johnston, O'Malley, Bachman, & Schulenberg, 2012). Multiple questionnaire forms are used; question items on use of earnings are administered to random portions (approximately one-sixth) of each representative national sample. Cases are weighted to take account of sampling design and absenteeism; weights are normalized so that the weighted numbers approximately equal the actual number of questionnaires (raw observations). For most analyses, data were combined across years, because analyses summarized below indicated that there were no important differences in patterns of relationship across the years. Nearly all analyses of high school seniors were limited to the approximately 49,000 respondents who reported working for pay during the school year and who responded to at least one of the questions about uses of earnings. Relational analyses used case-wise deletion to deal with missing data. That is, each analysis was limited to those cases that provided complete data (i.e., no missing data) on the measures used in that analysis. No imputation of missing data was used, because other MTF analyses involving student employment (Bachman, Staff, et al., 2011, 2013b) obtained results that were highly similar whether case-wise deletion or multiple imputation of missing data was used.

Weighting is used routinely in analyses of MTF data to account for initial sample selection probabilities. To reduce any bias due to absentees at the time of survey, additional weights were used in these analyses to adjust for different rates of absenteeism during the four weeks preceding the survey.

As noted above, our primary focus in this paper is upon students who work during the school year. However, many of the students who did not have paid work during the school year nevertheless reported their uses of earnings; but this is not surprising, because the question (described below) asked about total earnings for the year, including summer jobs. Exploratory analyses of responses from these respondents, who presumably were reporting on their use of summer earnings, revealed few differences in uses of earnings by summer-only employees compared with those employed during the school year. The one exception was that the "summer only earners" were only half as likely to spend 41% or more of their earnings on cars. We also found no substantial differences in key relationships examined below (See Appendix Table 1 for complete data).

Sample for panel analyses. A limited set of analyses was carried out using MTF panel data from subsets of respondents from the high school graduating classes of 1981 through 1999. All follow-up participants were selected at random from the MTF high school senior samples; those who had reported use of illicit drugs (in their senior year of high school) were over-sampled by a factor of 3 to 1 and then weighted (by a factor of 0.333) during analyses. Follow-up surveys were conducted by mail; participation was requested at two-year intervals; and initial follow-ups occurred one year after graduation for a random half of each sample and two years after graduation for the other half. Following procedures used in a previous and much more extensive panel analysis of the MTF follow-up samples (Bachman, Staff, et al., 2011), we focused on the second follow-up (when respondents were modal ages 21–22 and many were nearing the end of college), and the sixth follow-up (modal ages 29–30, well after most had completed their further education). The numbers of cases for the present analyses were limited by the fact that the use of earnings items appeared on only one of six questionnaire forms. Out of 5,218 weighted target cases who in 12th grade had reported working one or more hours on paid jobs, 3,573 weighted cases (68.5%) were available from the second follow-up and 2,677 weighted cases (51.3%) were available from the sixth follow-up; specific weighted Ns are included in Table 4.

Measures

Full question texts and response categories for all variables used in these analyses are shown in Appendix Table 2. We summarize the key measures here.

Work intensity during the school year. Respondents were asked, “On the average over the school year, how many hours per week do you work in a paid or unpaid job?” The response categories were: none, 5 hours or less, 6–10, 11–15, 16–20, 21–25, 26–30, and more than 30 hours. A separate question about amount of money earned was used to distinguish those who worked but not for pay.

Use of earnings. Beginning in 1981, a question with five sub-items was included in one of the MTF questionnaires (Form 5). The main question stem was worded as follows: “Please think about all the money you earned during the past year, including last summer. How much of your earnings have gone into:” Respondents are asked to select one of the following: “None”, “A little (1-20%)”, “Some (21-40%)”, “About half (41-60%)”, “Most (61-80%)”, “Almost all (81-99%)” or “All”. This item set was intended to tap uses of total earnings, not just earnings from paid work *during the school* year. Although for present purposes it might have been preferable if the question had excluded summer earnings, we believe that the answers correspond at least fairly closely to what would have resulted from a more restricted wording.

We were concerned that some item non-response might occur if some respondents just skipped answering sub-items for which their answer would have been “None.” In fact, however, when we examined patterns of responding, focusing on just those who did report working for pay during the school year as shown in Appendix Table 3, we found that fewer than two percent of respondents provided only partial data for this question set; specifically, 0.12 percent answered only one of the five sub-items, 0.20 percent answered only two, about half of one percent answered only three, and one percent answered four (i.e., skipped only one). We opted to allow missing data for these selectively omitted items in most analyses.

A potentially more important problem is that, among students who worked for pay during the school year, a total of 7.6% failed to answer any of the five sub-items about what they did with their earnings. Incidentally, the missing data rate among those not working for pay was a good deal higher (14.5%), quite possibly because many of these individuals felt they had little or nothing in the way of earnings on which to report. We were concerned that the loss of those who failed to provide answers might distort the sample. The fact that they amounted to less than 8 percent of the employed sample places limits on that possible distortion; moreover, we found that this non-response was not strongly correlated with any variables of particular importance in these analyses. The most likely correlate of non-response would be GPA; this is based on the assumption that failure to respond reflects limitations in reading ability such that lower GPA students would be less likely to get through most of the questionnaire within the time limit of one class period. Indeed, completion of the use of earnings items is positively correlated with GPA, as predicted; however, that positive correlation is only 0.09, suggesting that the potential

distortion, at least in terms of GPA and correlates, is quite limited. Accordingly, we saw no value in attempting to reweight in order to adjust for "likely non-completion of the earnings items," especially because non-completion is simply not sufficiently predictable – either from GPA, or college plans, or a combination of these and several other potential predictors that were explored.

The set of five questions about use of earnings was designed to provide a good deal of detail, so instead of simply asking respondents to rank-order the five areas in terms of which received the most funds, next most funds, and so on, a separate question is asked about each area, so that respondents can report proportions of earnings allocated to each. This more detailed question format facilitates examination of each area separately (as we do in most of the analyses to follow). However, it also opens up opportunities for respondents to provide inconsistent responses, such as allocating more than 100% of earnings across the several categories. Fortunately, this occurs relatively infrequently. The mid-point of the response scale is "About half (41-60%)" and we found it useful for some analysis purposes to dichotomize responses into "about half or more" (combining the top four categories, equal to 41% or more), versus less than that (bottom three categories).

Outcome Variables. School performance was measured with a question about self-reported grade point average attained "so far in high school" coded on a nine-point scale ranging from 1 = "D" to 9 = "A." Educational aspirations were measured with a question on likelihood of graduating from a 4-year college program (coded on a four-point scale from "definitely won't" to "definitely will"). Substance use measures included frequency of cigarette use in the last 30 days, marijuana use in the last 12 months, and heavy drinking (five or more drinks in a row) during the past two weeks. The response scales are approximately logarithmic; above the lowest level of use, each unit is roughly double the previous one. We also include a measure of the frequency of evenings out per week for fun and recreation, an index of materialism, and measures of locus of control, self-esteem, and social support.

Background Factors. Sociodemographic measures include gender, race/ethnicity, class cohort, and parental education. Race and ethnicity were coded into four dummy variables indicating Hispanic (Mexican American, Cuban American, Puerto Rican, and other Latin American), African American, Asian American, and White. Urban density, number of parents in the household, whether the respondent's mother held a paid job, the respondent's type of high school program, and his or her truancy over the last month were also included as predictors of substance use, GPA, and aspirations. We also examined number of siblings as a potentially relevant background factor; we found that it showed essential zero correlations with most uses of earnings, but did correlate positively with using earnings to contribute to family needs. Most

importantly, in preliminary analyses (not shown), number of siblings was found to make no additional contribution to the prediction of GPA or cigarette smoking, so for the sake of parsimony it was not included among the background factors.

Analysis Strategy

Dichotomized use of earnings measures. Although the uses of earnings measures permit respondents to indicate up to seven different levels of spending, preliminary analyses indicated that dichotomizing the responses at "about half (41–60%)" or more captured quite clearly the differences among various uses of earnings, and also any trends across time. Accordingly, this dichotomization was used in the analyses reported here. Trends in uses of earnings are shown as percentages reporting use of 41% or more of earnings on each of the five categories of spending; in order to reduce random sampling fluctuations, data were combined across 5-year intervals, except that 3-year intervals were used for the most recent periods.

A focus on paid work intensity. As noted above, samples for the present analyses were limited to high school seniors who reported an average of one or more hour per week of paid work during the past year. This restriction was prompted by our primary focus on the correlates of paid work intensity; the decision to restrict was further influenced by two findings from prior analyses: (a) that the zero hours of work category does not conform to the generally linear relationships involving paid work intensity (Bachman, Staff, et al., 2011); and (b) that many non-workers indicate that they would prefer to be working (Bachman et al., 2003; Staff, Schulenberg, & Bachman, 2010), a finding that suggests many in the not-employed category were not there voluntarily.

Use of bivariate and multivariate correlation methods. Many preliminary analyses, as well as the final analyses reported here, made use of multiple classification analyses (MCA), a form of multiple regression analysis making use of dummy variables (Andrews, Morgan, Sonquist, & Klem, 1973). Other analyses used OLS regression analyses, with dummy variables employed for categorical measures, but with work intensity treated as a continuous measure in order to focus on linear relations.

Analyses of panel data. Earlier analyses of MTF panel data had shown that some negative correlates of high work intensity persisted throughout respondents' twenties, particularly lower academic attainment and higher rates of cigarette use (Bachman, Staff, et al., 2011). We partially replicated and extended those earlier analyses by examining the correlations separately for those who as high school seniors did or did not save 41% or more of their earnings for college.

RESULTS

Part 1. Teenagers' Uses of Earnings

What do high school seniors do with their earnings, and has that changed much in the past three decades? The short answers are that they spend mostly on "their own needs and activities," spending on cars comes in second (especially among males), and savings for future education or to help out the family rate rather low. The proportions have not changed very much between 1981 and 2011 (see Figure 1A), with the one interesting exception that spending on cars dropped slightly in the 2006-2008 interval, and then further in 2009-2011.

It should be noted that Figure 1A displays proportions who report spending 41% or more of their earnings in each of the five areas. Data are combined across five-year intervals to reduce random sample fluctuations, except that three-year intervals are used for 2006-2008 and 2009-2011 to capture recent changes in somewhat greater detail. Results are shown for the total samples, then separately for males and females, for those from higher SES and lower SES families (based on parental education), and for four different race/ethnicity subgroups (also separated by gender).

Gender differences. Figure 1B shows a number of gender differences worthy of note. The largest gender difference involves spending on cars; over the entire time period (1981-2011), 30% of males versus 20% of females reported that they spent 41% or more of their earnings on cars. The proportion of males varied little between 1981 and 2005, at about 30%, but then dropped to 23% by 2009-2011. Unlike the males, females showed gradually increasing proportions spending heavily on cars, rising from 16% in 1981-1985 to 24% in 1996-2005, but thereafter they (like the males) showed a drop (to 17% in 2009-2011).

The discretionary spending category (spending on their own needs and activities) consistently shows the highest proportions of males (slightly over half) and even higher proportions of females. The gender differences across the three decades are not very large, averaging only about 4 percentage points, but they are always in the same direction.

Across the three decades about 17-18% of both males and females reported saving substantial proportions of their earnings for future education expenses. This is a category of particular interest in analyses reported later; here it is worth noting that the proportions are fairly consistent across time – and consistently small.

The smallest proportions, however, are the roughly 10-13% of seniors who reported contributing 41% or more of their earnings to family needs. These proportions have risen slightly

but fairly consistently across time, with females usually about one percentage point higher than males.

Differences by socioeconomic status (SES). Figure 1C shows the uses of earnings, this time contrasting those with higher parental education (at least one parent completed college) versus all others. It is not surprising to find that students from lower SES families (i.e., less educated parents) were about twice as likely as higher SES students to report contributing heavily to family needs, with both SES categories showing modest increases over the three decades. The lower SES students were also more likely to spend substantial portions of their earnings on cars and car-related items, with both groups showing declines in recent years. In contrast, the higher SES students were more likely to set aside substantial portions of earnings for future education expenses. What is perhaps surprising is that Figure 1C shows no appreciable SES differences in spending on self.

Differences by race/ethnicity. Trend lines were also examined for four major race/ethnicity categories (also separated by gender). Although trends across time did not differ markedly across the subgroups, a number of patterns were highly consistent across the three decades; these are illustrated in Figure 1D, and can be summarized briefly here. First it should be noted that half or more of the students in each subgroup reported using 41% or more of their earning for their own personal needs (what we consider to be mostly discretionary spending), with no large subgroup differences. Substantial differences did appear, however, in reports of contributions to family needs; White students were lowest (about 8%), African American students were highest (25%), followed closely by Hispanic students (22%), and Asian American students were intermediate (at 13%). Also, proportions saving 41% or more of their earnings for future education showed moderate subgroup differences, with highest levels among Asian-American students (22%) and African-American students (19%), and lowest levels among Hispanic students (13%).

We already noted that spending on cars differed substantially by gender, and overlaid on that were race/ethnicity differences. Among Asian-American students, proportions of males who reported spending 41% or more of their earnings on cars averaged only about 15% (half the overall average among males), and among females the average was about 12% (just over half the overall average among females). A further difference is that proportions of White females who reported spending that heavily on cars were consistently somewhat higher than proportions of African American or Hispanic females who did so.

Part 2. Differences in Person Characteristics Linked to Uses of Earnings

A first look at how uses of earnings are related to a variety of person characteristics is provided by the product-moment correlations shown in Table 1A. These correlations are "agnostic" as to causal direction; this is appropriate, given that likely causal directions vary across the different person characteristics. We also conducted supplementary multivariate analyses using Multiple Classification Analysis (MCA) controlling for a number of background factors including parental education, number of parents in the home, gender, and race/ethnicity; see Table 2; we note some key findings below.

The correlations in Table 1A are generally quite small, so it does not appear that there are strong links between those person characteristics shown in the table and what teenagers choose to do with their earnings. Nevertheless, given the large samples involved, most of the correlations are statistically significant (for any correlation with absolute value equal to .03 or more, $p < .001$, based on significance tests corrected for sample clustering and other design effects). Moreover, in spite of their relatively small size, a number of the correlations in Table 1A do show meaningful patterns.

The first column in Table 1A shows that those who save more for future education are likely to have higher grades, greater college plans, and lower rates of substance use; this is consistent with Hypothesis 2. (Our brief examination of the "summer-only" earners, mentioned earlier, also showed that those who reported saving 41% or more of their earnings for future education had higher grades and college plans, and lower substance use, providing further support for Hypothesis 2.) Multivariate analyses (shown in Table 3A) reduced most regression coefficients by about one-third or more, indicating that considerable portions of the relations shown in the first column of Table 1A are explainable in terms of family SES (parental education), race/ethnicity, or other background factors. The bottom entry in the first column of Table 1A indicates that the more a student saves for further education, the less likely that student is to work long hours on a paid job during the school year; this is consistent with Hypothesis 1.

Table 1A also indicates that teenagers who spend more of their earnings on cars are likely to have slightly lower than average grades, less likely to plan on completing a college degree, and very slightly more likely to report substance use. However, the multivariate analyses (shown in Table 2) reduce all of these relations to trivially small values, once SES and other background factors are controlled. The largest correlation in Table 1A ($r = .216$) shows that investing a lot of their earnings in cars tends to go hand in hand with spending long hours in paid jobs during the school year.

The third column in Table 1A shows that use of earnings to save for other long range purposes does not correlate appreciably with any of the measures shown in Table 1A. It thus appears that saving for other long-term goals is not very similar to saving for future education, at least not in terms of the person characteristics shown in the table.

The fourth column in Table 1A shows that those who spend more of their earnings for their own needs (i.e., discretionary spending) are slightly lower than average in grades and slightly more likely to engage in substance use (especially marijuana use). They are also more likely than average to spend evenings out for fun and recreation, and they score higher on the measure of materialism. These very modest associations are only reduced by about one quarter after multivariate controls for SES and other background factors. It is of interest that high levels of "discretionary spending" are not associated with longer hours in school-year jobs.

Finally, the fifth column in Table 1A shows that those who report contributing more of their earnings for family needs have poorer grades and lower college plans, although controls for background factors cut these coefficients in half. Contributions to family needs are also correlated with poorer than average scores on the measures of locus of control, self-esteem, and loneliness; the MCA controls for background reduce these coefficients by only one quarter to one third. Those who contribute more of their earnings to family needs also spend slightly fewer than average evenings out for fun and recreation, whereas they are more likely to spend long hours on the job. Contributing earnings toward family needs does not, however, show any appreciable correlation with substance use. As noted above and shown in Figure 1D, contributions toward family differ appreciably by race/ethnicity subgroup. Table 1B shows race/ethnicity differences in correlations between uses of earnings and person characteristics. The findings for Whites are, of course, quite similar to those outlined above for the total samples (because Whites constitute the majority of the total). Findings for Asian Americans are fairly similar to those for Whites, although the correlations are generally slightly smaller. Correlations for Hispanics tend to be smaller still. Most correlations for African-Americans are quite small, especially those involving substance use.

Part 3. How Different Uses of Earnings May Moderate Possible Effects of Work Intensity

Special focus on saving for future education. We reported above that saving for future education is positively correlated with grades (GPA) and negatively correlated with substance use. Now we consider whether saving for college also may *moderate* any possible deleterious impacts of high work intensity. We conducted bivariate and multivariate analyses, separating respondents into two categories: those who saved 41% or more of their earnings for their future

education, and those who did not. This dichotomization, combining those who reported saving "about half (41-60%)" with all of those who reported saving at higher levels, yielded less than one-fifth of the sample. Focusing separately on the much smaller subset who saved 61% or more yielded very similar findings; accordingly, we continued distinguishing primarily between those who saved "about half or more," versus those who did not. For each of these two categories, we examined relations between paid work intensity (during the school year) and the range of possible outcome dimensions shown in Table 3A.

Links with Grade-Point Average. Figure 2 presents MCA results for paid work intensity treated as a categorical predictor of GPA; the figure shows bivariate relations (open symbols) as well as multivariate relations (solid symbols) controlling for background measures (as listed in the figure). Four things are clearly evident in the figure: First, and again consistent with Hypothesis 2, GPAs are higher for those saving 41% or more of their earnings for future education, and this holds true at each level of paid work intensity. Second, it is also clear, as noted earlier, that controls for background reduce but by no means eliminate the association between paid work intensity and GPA. Third, and most important, at both the bivariate and multivariate levels, the negative associations between work intensity and GPA are equally evident for those who do and do not save substantially for future education – a result contrary to that predicted by Hypothesis 3. Finally, it is clear from the figure that the relations with paid work intensity are essentially linear; the results are all virtually straight lines – and because this is generally the case for the other relations we examined using MCA, we are able to use standard regression analyses, reporting linear relations with paid work intensity, in order to summarize large numbers of analyses, as reported in Table 3A.

Table 3A summarizes linear associations between hours of paid work and GPA, and between hours of paid work and a number of other possible outcomes (with those not employed always omitted from these analyses in order to preserve linearity). The product-moment (i.e., bivariate Pearson) correlation coefficients between paid work intensity during the school year and GPA are -.191 for those saving 41% or more of earnings for college and -.156 for those not saving that much; the standardized multivariate estimates are -.107 and -.073, respectively. These differences in sizes of coefficients are not very large, and are actually in the opposite direction of that predicted by Hypothesis 3. The bivariate coefficients are substantially larger than the multivariate coefficients, showing that only about half of the relations between work intensity and GPA are independent of the background controls. We examined these same coefficients separately for males and females and found no appreciable gender differences. We also examined the coefficients for the four racial/ethnic subgroups, and summarize those findings below. (Coefficients for those who reported saving 61% or more of earnings for higher

education, versus those who did not, can also be seen in Table 3A; results were virtually identical to results when we dichotomized at 41% or more.)

Links with college plans. We conducted the same sorts of analyses examining links between work intensity and college plans; the results, shown in the second row of Table 3A, are similar to those for GPA. Specifically, the coefficients were negative, and very nearly equal between those who saved more than 40% for college and those who did not.

Links with substance use. We then carried out similar analyses focusing on students' reports of their cigarette use, instances of heavy drinking, and use of illicit substances. The links with cigarette smoking are strongest, as can be seen in Table 3A, and they are illustrated in Figure 3. (The figure uses a dichotomy so as to provide results interpretable as proportions, but the Table 3A analyses using the full scale for smoking produced almost identical results.) Among those saving 41% or more of earnings for future education, the bivariate analysis shows a strong association between smoking and work intensity; specifically, 26% of those who worked more than 30 hours a week were smokers, contrasted with only 7% among those who worked 5 or fewer hours per week; and after controls for background factors the difference was still 21% versus 10%. Among those not saving extensively for future education, the corresponding differences were also substantial: 31% versus 13% before controls, and 28% versus 17% after controls. So with respect to smoking, as we saw with the GPA findings above, there is no evidence that saving for college dampens the possible costs of high work intensity during the school year – a finding contrary to the prediction from Hypothesis 4. Of course, Figure 3 also shows that the big college savers were, in general, less likely to smoke; however, these differences appear equally large across the whole spectrum of work intensity, with no indication that college saving dampens the correlation between long work hours and smoking.

Table 3A provides the linear coefficients linking work intensity with smoking (3rd row) and other forms of substance use (rows 4-6). The Table 3A findings for smoking are fully consistent with the MCA results shown in Figure 3; the multivariate coefficients are roughly half the size of the bivariate correlations, indicating that a good deal – but by no means all – of the linkage between work intensity and likelihood of smoking is overlapping with the controlled background factors. The bivariate correlations for the other forms of substance use are all positive, but somewhat smaller than those for smoking, whereas the multivariate coefficients are very small – often approaching zero. Nevertheless, there is a clear consistency in the patterns for drinking (see Figure 4), annual use of marijuana (see Figure 5), and annual use of cocaine (no figure shown): the findings all show small positive links with work intensity that are essentially the same whether students are saving heavily for college or not.

Links with other possible outcomes. Table 3B, in addition to repeating the coefficients for educational attainment and educational aspirations, and providing additional substance use measures, also provides coefficients for frequency of evenings out, the materialism index, and measures of locus of control, self-esteem, and social support. For evenings out, the product-moment correlations are essentially zero; the multivariate coefficients are slightly negative, indicating very slightly fewer evenings out for those working long hours in jobs during the school year (once other factors are controlled); most importantly, the coefficients are just about the same for those who save heavily for college and those who do not. For the materialism index, both groups show multivariate coefficients of about zero. Locus of control is somewhat lower among those working long hours, although the multivariate coefficients are less than half as large as the bivariate correlations; these associations are larger among those saving heavily for college. The same pattern of findings, albeit much weaker, can be seen for the self-esteem measure; again, there is no evidence for any "protective" effect from saving for college. Finally, the social support (versus loneliness) measure shows small negative associations with work intensity, with no appreciable differences linked to college saving.

Other uses of earnings. Analyses parallel to those summarized in Table 3B were carried out for each of the other four uses of earnings (See Appendix Tables 4A-4D). The patterns of correlations between work intensity and the other measures are much the same as shown in Table 2, no matter which of the use of earnings measures is used to divide the sample into contrasting groups. Most importantly, there is no consistent evidence to suggest that any of the uses of earnings provides "protection" against possible negative effects of high work intensity during the school year.

Subgroup differences in possible moderating effects of earnings uses. Although total sample analyses did not reveal any likely "protective" effects of saving for future education, or of any of the other uses of earnings, we conducted subgroup analyses parallel to those shown in Table 3B to see whether any such moderating patterns might emerge. We conducted a detailed examination of patterns of coefficients for both gender and racial-ethnic subgroups. Table 3C reveals a general tendency for African-American students to show very low correlations between work intensity and any of the possible outcome measures examined, no matter what the students did with their earnings. Much the same was true for Hispanic students. Among white students, on the other hand, the coefficients were generally slightly stronger than those for the total sample shown in Table 3A. Among Asian-American students, the results were less consistent, perhaps in part due to smaller subsamples; the coefficients for GPA were similar to those for the total sample, the coefficients for substance use were mostly lower, and the others were mixed with no clear pattern.

Further Cross-Sectional Analysis Results

Differences linked to number of parents in the home. Prompted by the findings of Rocheleau and Swisher (2012) mentioned above, earlier analyses of MTF data examined correlations using the measures shown in Table 2, this time separating the sample according to number of parents in the home. The results are summarized in Appendix Table 5. We found that correlations were consistently smaller for those living with just one or zero parents. Because there are substantial racial/ethnic differences in proportions living with both parents, we repeated the analyses separately by subgroups. The results, reported in Bachman, Staff, O'Malley, & Freedman-Doan (2013b), are consistent with those of Rocheleau and Swisher (2012) in showing that the negative correlates of work intensity are most pronounced among students living with both parents. In addition the MTF findings show that these patterns are especially clear when the sample is restricted to White students, whereas the patterns are not present among African-American students. The findings also show, at least for White students (who constitute over three-quarters of the total sample), that negative correlates are consistently weakest among those living with zero parents. Indeed, for alcohol use among White students, the links with work intensity are nearly as strong for those living with one parent as for those living with two (although the mean levels of use are markedly higher among those living with only one parent).

Dollars earned versus hours worked. Early in our analyses we examined a measure of earnings from work as a possible additional predictor of GPA and substance use. We found, of course, a strong positive correlation between hours worked and amount of money earned (r =.56; see Appendix Table 6). We also found that earnings correlated with GPA and substance use in the same directions as did work intensity; however, the earnings correlations were weaker and added no additional predictive value to work intensity. Accordingly, we had not considered it necessary to include dollars earned among the measures in the regression analyses reported above.

After the above analyses were concluded, we took a further look at income prompted by the work of Wright, Cullen, Agnew, and Brezina (2001) that examined money as "the root of all evil," at least with respect to adolescent delinquency. This time we included not only earnings from work but also income from other sources. The results are summarized in Appendix Table 6.

Consistent with our earlier findings noted above, GPA shows negative correlations about twice as strong with hours of paid work as with earnings from work. GPA also shows a smaller negative correlation with income from other sources. Regression analyses combining all three predictors of GPA (Appendix Table 6) show that earnings from work make a near zero contribution, whereas income from other sources retains its modest negative relationship with

GPA. One plausible interpretation is that part – but only part – of any negative effects of high work intensity on GPA might be indirect via the earnings involved, whereas income from allowances and other sources may make a small separate and independent contribution to lowering GPA.

The findings for 30-day smoking show patterns similar to those for GPA, albeit in opposite directions. That is, smoking rates are positively correlated with work intensity and with income, and there appears to be a possible modest independent contribution of income from other sources, but the link with earnings from a job overlaps entirely with work intensity.

This brief analysis extends the work of Wright et al. (2001) in at least two ways. First, it extends some of their findings using very large and nationally representative samples. Second, it includes work intensity as a separate predictive factor, and shows intensity to be the most important of the three predictors, entirely overlapping the link with earnings from work.

One of the proposed explanations for positive correlations between work intensity and substance use is that working provides income which can be used to purchase cigarettes, alcohol, and other substances. That is not inconsistent with the notion that *some of* the possible effects of work intensity might operate indirectly through income from work. But perhaps a more telling finding is that income from other sources appears to make a modest contribution of its own to cigarette use – entirely consistent with the view of money as a facilitator of substance use.

Further Results: Panel Analyses of Long-Term Outcomes

Earlier analyses of MTF panel data showed 12th grade work intensity correlating negatively with educational attainment and positively with cigarette use (Bachman, Staff, et al., 2011). We now explore whether those links are weaker among those who saved much of their high school earnings for future education; such findings would be consistent with Hypotheses 3 and 4. As noted earlier in the Methods section, we followed procedures used in the previous panel analyses and focused on the second follow-up (respondents were modal ages 21-22, when many were nearing the end of college), and the sixth follow-up (modal ages 29-30, well after most had completed their further education). The earlier panel analyses were carried out with much larger samples and involved multiple analysis methods and various sample adjustments (including reweighting) in order to deal with sample attrition, missing item data, and other methodological issues. For present purposes, however, we consider much simpler analyses to be sufficient, for reasons outlined below.

One of the reasons for taking a simpler analysis approach is that the sample and subsample numbers of cases available for the present panel analyses are much smaller than the numbers available for the earlier panel analyses (Bachman, Staff, et al., 2011). Panel data available for studying longer-term impacts of different high school saving and spending practices are restricted to the approximately one-sixth of the MTF respondents who completed the questionnaire form containing the items about use of earnings, whereas the earlier panel analyses used items available in all six 12th grade questionnaire forms. A further restriction is that employed high school seniors who reported saving more than 40% of their earnings for future education constitute only about 17% of the 12th grade respondents, as noted earlier in this report. Added to that are the usual problems of panel attrition; even though such attrition is a bit lower than average for those who saved heavily for college in 12th grade, the subsample in that category is smaller than 600 cases at the time of the second follow-up (modal ages 21-22) and smaller than 500 cases by the time of the sixth follow-up (modal ages 29-30). The confidence intervals around statistics based on samples this small are far larger than those in the main portion of this report; consequently much larger differences in correlation sizes would be needed to provide clear support for Hypotheses 3 and 4. But although we realized at the outset that rather large differences would be needed to support the hypotheses, we nevertheless felt that an initial exploration was warranted using the available panel data.

Analysis strategy for the panel analyses. We began by comparing bivariate associations between 12th grade work intensity and outcome measures at the second and sixth follow-ups. A decision about whether to undertake more extensive sample reweighting adjustments and multivariate analyses was held in abeyance pending the examination of the initial findings; those findings (reported below in Table 4) led us to conclude that further analyses were not necessary.

Table 4 displays findings for respondents from the high school graduating classes of 1981 through 1999 who were selected for the follow-up surveys. Results are limited to those who reported one or more hours of paid employment during 12th grade, and who reported data on the outcome measure being shown. In other words, all data on actual responses were used; respondents were not excluded if they were missing data on some other outcome measure, but there was no imputation of missing data on the measures included in each correlation. The table shows product-moment correlations between 12th grade paid work intensity and various outcome measures at three points: the initial survey in 12th grade (modal age 18), the second follow-up (modal ages 21-22), and the sixth follow-up (modal ages 29-30). For all of these correlations, a collapsed version of 12th grade work intensity was used, with 1-15 hours combined as the first category. This collapsed coding was prompted by earlier findings that 12th grade GPA did not differ, on average, among those who worked 1-5, 6-10, or 11-15 hours (Bachman, Staff, et al., 2011); we opted to use this coding only after preliminary exploration

revealed that the correlations shown in Table 3A were consistently slightly stronger when using that coding rather than the full-scale coding.

Table 4 reports findings for the total samples (meeting the restrictions described above), then separately comparing those who as 12th-graders reported saving 41% or more of earnings for further education and those who did not. The table includes Ns (based on data weighted by follow-up selection probabilities), means, standard deviations, product-moment correlations as described above, and the 95% confidence interval for each correlation.

Differences in means are consistent with Hypotheses 1 and 2. Here, as we found with the much larger cross-sectional samples in the earlier part of this report, those who saved about half or more of their earnings for higher education worked fewer hours in 12th grade than those who did not. This difference, consistent with Hypothesis 1, is about one-fifth of a standard deviation and is highly significant ($p < .001$). At all three modal ages, the measures of academic attainment showed higher scores by the college savers, consistent with Hypothesis 2; the GPA difference was about one-third of a standard deviation, and the years of college completed at modal ages 21-22 and 29-30 were both about one-half of a standard deviation ($p<.001$ for all). Also consistent with Hypothesis 2, mean rates of smoking were consistently just over one-quarter of a standard deviation lower among the college savers at modal ages 18, 21-22, and 29-30 ($p < .001$ for all). In sum, fully consistent with the cross-sectional findings reported earlier in this paper, those who set aside substantial portions of their 12th grade earnings were better off in terms of academic attainment and cigarette use; moreover, these differences, already evident by the end of high school, remained undiminished throughout ages 19-30.

Correlations do not support Hypotheses 3 and 4. The questions about whether college saving during high school might mitigate possible negative effects of high work intensity are addressed by comparing correlations for the college savers versus the others. For measures of academic attainment, the product-moment correlations in Table 3A provide little support for Hypothesis 3. The 12th grade data for GPA, based on the much smaller follow-up samples, are consistent with findings from the far larger cross-sectional samples shown earlier in this report; the correlations here are virtually identical (-.139 for the college savers and -.142 for the others). Correlations for longer-term educational attainment at modal ages 29-30 are also virtually identical (-.26 for the college savers, -.25 for the others). The correlations for attainment at modal ages 21-22 differ somewhat, showing a smaller correlation for the college savers; however, this correlation (-.20) is not significantly different from the longer-term correlation for this group (-.26) and seems more likely to reflect random fluctuations rather than any complex shifting pattern of relations. So, in balance, the panel findings provide no clear support for Hypothesis 3.

As for Hypothesis 4, we found consistently positive associations between high school work intensity and cigarette smoking (all significantly above zero, $p < .01$). Although the sizes of the coefficients vary somewhat from one group to the other and across time, the fairly large confidence intervals (especially for the small group of college savers) overlap to a large extent; given those overlaps, and the lack of any clear pattern to the differences, we find no support for Hypothesis 4.

In sum, the correlational data do not provide any clear evidence that saving for college appreciably moderates negative links between high part-time work intensity during high school and possible longer-term consequences in terms of either educational attainment or cigarette use. The fact that the negative links with high school work intensity do show up for long term outcomes is consistent with the earlier analyses of the larger MTF panel samples (Bachman, Staff, et al., 2011); however, neither set of findings, even though based on panel data spanning a dozen years, can fully resolve remaining questions of causation – a topic to which we return in the Discussion.

DISCUSSION

This examination of teenagers' uses of earnings, based on three decades of data from high school senior participants in the MTF project, reveals a great deal of consistency across time. Nearly all seniors spend at least some portion of their earnings on "their own needs and activities," and roughly 55% of males and 60% of females over the years reported spending about half (41-60%) or more of their earnings in this fashion. Thus a great deal of teenage income is used for what might be described as "discretionary spending," and this is ubiquitous across family SES (as indicated by parental education) as well as different race/ethnicity subgroups. The next most frequent use of earnings is spending on cars; roughly 30% of males and 20% of females over the three decades spent about half or more of their earnings on cars. Saving for future education and saving for "other long-range purposes" are roughly tied for a distant third place. The least likely use of teenage earnings was "helping to pay family living expenses," although the proportions indicating spending about half or more in this category did rise from about 9% in 1981-85 to about 13% in 2009-2011 (see Figure 1). Spending to help out with family expenses also was distinctly higher among lower SES and non-White students, but in none of these subgroups did it begin to rival spending on self.

Are there other important differences between those who choose one versus another way of using their earnings? There are a number such differences, summarized in Table 1, and most of them are consistent with expectations: As predicted in Hypothesis 1, students who save more

for college are less likely to work long hours in paid jobs during the school year, although the correlation is a very modest -.08. Consistent with Hypothesis 2, saving for college is positively correlated with grade point averages and college plans (r = .17), and somewhat negatively related to smoking and other substance use. Additional analyses revealed similar correlations among those whose earnings were presumably limited to summer jobs, providing further support for Hypothesis 2. Other differences consistent with expectations are: The materialism index is positively correlated with spending on self (r = .20), and those spending more on cars tend to work longer hours (r = .22). As for some of the other measures, most show little association with uses of earnings. The most interesting exceptions involve the negative picture of those who find it necessary to contribute more heavily to family needs; they tend also to be lower in locus of control, lower in self-esteem, higher in loneliness, likely to spend fewer evenings out for fun and recreation, more likely to be working long hours, and less likely to get good grades or be planning on getting a college degree. We are not inclined to view these correlates as primarily *consequences* of contributions to family needs; rather, it seems likely that they are due mainly to prior and more fundamental factors.

A key set of questions explored in this paper is whether working and saving toward certain goals, such as further education, might somehow "protect" against what might otherwise be negative effects of high work intensity, as stated in Hypotheses 3 and 4. The results, shown in Figures 2 and 3 provide no support for those "interaction hypotheses." To be sure, the data show that those saving for future education have higher GPAs (Figure 2) and are less likely to be daily smokers (Figure 3); nevertheless, apart from those overall differences, it remains true that working long hours has a number of negative correlates, and that is every bit as true for those who save a lot for future education as for those who do not. The coefficients shown in Table 2, both bivariate and multivariate, are just about equal for the college savers and the non- (or less-) college savers, except for a few dimensions where the negative connections are actually stronger among the savers. In addition, the panel data do not provide any evidence that saving for college appreciably moderates negative links between high work intensity during high school and possible longer term consequences for either educational attainment or cigarette use. It is reassuring to note that the negative links with long term outcomes shown in the present panel analyses are very similar in size to those found in previous analyses of the larger MTF panel samples by Bachman and colleagues (2011), thus suggesting that the several sample restrictions employed in the present analyses did not produce any substantial distortions. In sum, students saving substantial portions of their earnings for future education are better off than their classmates in a number of respects, but college saving does not appear to offer any protection against the negative correlates, and possible long-term negative consequences, of high work intensity.

We noted in the introduction the Marsh and Kleitman (2005) finding that students who saved money for their future education had higher educational aspirations, performed better in school, were more involved in extracurricular activities, had fewer "bad habits" (e.g., substance use), and had higher levels of educational attainment. That would seem to encourage high school students to save much of their earnings for college, and it is consistent with our own findings in support of Hypotheses 1 and 2. But a close look at the Marsh and Kleitman findings shows also that the positive links with saving for college were additive – i.e., they did not interact with hours worked. In other words, those college savers who worked long hours still appeared less well off than the college savers who worked relatively few hours. So findings of Marsh and Kleitman, like our own, fail to support Hypotheses 3 and 4; college saving does not appear to offer any protection against possible negative effects of high work intensity.

We have been at some pains throughout this paper to describe the correlates of high work intensity as *possible* negative *effects*. We noted at the outset that a good deal of controversy remains as to whether these negative correlates are anything more than selection effects – so called because certain students select, and are selected for, long working hours during the school year. Now seems a good time to state our own views on that controversy, and how the evidence presented in this paper may bear on the matter. Most prior research on teenage employment, cited throughout this paper, has consistently held that at least substantial portions of the relationships between work intensity and negative "outcomes" are attributable to other factors. To take one example, earlier MTF work showed that students' *preferences* to work long (or short) hours during the school year emerged at younger ages (i.e., earlier grades) than their actual achievement of various hours of employment, and that student preferences about work intensity showed equal or stronger correlations with educational disengagement and other problem behaviors than their actual work intensity; however, controlling for the preferences did not completely eliminate the negative links between actual work intensity and the problem behaviors (Bachman et al., 2003; see also Staff, Osgood, et al., 2010; Staff, Schulenberg, et al., 2010). So the links with early preferences provide support for the selection interpretation, but the failure to completely account for the links with actual work intensity suggest some possible additional impacts due to high work intensity. The present findings also show consistently that controlling for other (presumably prior) factors can "account for" much of the associations between work intensity and poor school performance and also substance use. But *not all* of the associations disappear, and thus we are not prepared to conclude that all of the links are attributable to selection effects. Accordingly, our conclusion with regard to the selection versus socialization controversy is: both of the above. That is not simple or tidy, but neither is a great deal of social research using survey data obtained from complicated persons living in complicated real worlds.

When it comes to saving for college, both the present research and earlier studies noted above clearly indicate that high school students who save substantial portions of their earnings for college are better off than students who save less for that purpose, but that seems at least largely due to selection effects – i.e., long-standing differences between these two categories of students. Thus, employed high school seniors who are saving their earnings for college are doing it because they want to go to college. On average, these students will have better grades and will be less prone to problem behaviors than their peers who are not saving for college. It seems unlikely that their saving for college in the 12th grade does much to make them better students or protect them from substance use.

Nevertheless, the research also suggests that for students in either category (i.e., saving for college or not), there also may be negative *consequences*, more than merely *correlates*, of working long hours while at the same time trying to meet the requirements of their roles as students. As we mentioned in the introduction, numerous studies using longitudinal data and sophisticated methodologies to control for selection effects (e.g., fixed-effects analyses, propensity score methods, structural equation models) have shown negative effects of intensive work hours on academic achievement and social development. Scholars have offered many explanations for why these deleterious work effects persist (see Staff et al., 2009, for a summary); these explanations range from time trade-offs between work and school (i.e., paid work takes time away from school work) to employment as a facilitator of precocious identity (i.e., paid work increases autonomy from parents, heightens peer status, and facilitates movement into more adult-like roles and behaviors).

In the introduction we posed an important and practical question: If teenagers work for pay during the school year, are they better off if they save most of their earnings for college? Our conclusions above suggest two distinctly different answers to the question. First, it seems clear that those students who are "better off" are also somewhat more likely to devote substantial portions of their earnings toward college, and we think that primarily reflects *selection*. Second, it also seems very clear that saving for college does not "protect" against *possible negative consequences* of working long hours on a job during the school year. Therefore, students who plan to save most of their earnings for college should be commended, but should still be encouraged to avoid spending long hours in employment during the school year.

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Table 1A: Pearson correlations between uses of earnings and personal characteristics among those who reported part-time work during the school year. High school seniors, 1981-2011*

	Future Education	Car	Other	Self	Family
wtd. N	48547	48449	48340	48359	48268
High School GPA	0.167	-0.066	0.032	-0.071	-0.122
4-Year College Plans	0.168	-0.119	-0.007	0.004	-0.121
30-Day Cigarette Smoking	-0.106	0.062	-0.037	0.049	0.027
Heavy Drinking -- last 2 wks	-0.077	0.075	-0.016	0.067	-0.015
12-Month Marijuana Use	-0.117	0.029	-0.044	0.088	-0.008
12-Month Cocaine Use	-0.061	0.022	-0.019	0.039	0.014
Evenings Out per Week	-0.051	0.042	-0.018	0.134	-0.089
Materialism Index	-0.054	-0.017	-0.042	0.201	0.044
Locus of Control Index (collapsed scoring)	0.045	-0.100	-0.043	-0.022	-0.183
Self-esteem Index (collapsed scoring)	0.044	-0.027	0.005	-0.016	-0.105
Loneliness Index (collapsed scoring, higher score is less lonely)	0.030	-0.022	0.003	0.013	-0.115
Paid work during the school year	-0.076	0.216	0.018	-0.037	0.142

*Weighted N's shown here are for the correlation between high school GPA and the saving/spending variables. N's for other correlations vary slightly. All respondents had to report saving/spending more than "None" on 1 of the 5 use of earnings items.

Table 1B: Pearson correlations between uses of earnings and personal characteristics among those who reported part-time work during the school year. High school seniors, 1981-2011 by race/ethnicity*

	Future Education	Car	Other	Self	Family	Future Education	Car	Other	Self	Family
Whites						***Hispanics***				
wtd. N	36483	36423	36341	36386	36296	3560	3549	3545	3522	3528
High School GPA	0.194	-0.089	0.040	-0.074	-0.109	0.118	-0.004	0.040	-0.063	-0.057
4-Year College Plans	0.200	-0.128	0.001	-0.008	-0.143	0.067	-0.082	-0.018	0.006	-0.123
30-Day Cigarette Smoking	-0.132	0.051	-0.046	0.072	0.089	0.029	0.087	0.036	0.036	-0.012
Heavy Drinking--last 2 wks	-0.093	0.061	-0.021	0.088	0.028	-0.050	0.080	0.008	0.052	-0.035
12-Month Marijuana Use	-0.128	0.022	-0.045	0.106	0.023	-0.068	0.032	-0.016	0.037	-0.065
12-Month Cocaine Use	-0.070	0.019	-0.019	0.051	0.035	-0.021	0.038	0.002	0.002	-0.027
Evenings Out per week	-0.077	0.023	-0.028	0.153	-0.066	0.006	0.059	0.021	0.132	-0.090
Materialism Index	-0.060	-0.007	-0.062	0.193	-0.013	-0.070	0.022	-0.031	0.195	-0.047
Locus of Control Index (collapsed scoring)	0.085	-0.102	-0.018	-0.026	-0.170	-0.052	-0.115	-0.106	0.000	-0.161
Self-esteem Index (collapsed scoring)	0.063	-0.024	0.020	-0.034	-0.115	-0.011	-0.014	-0.015	0.007	-0.088
Loneliness Index (collapsed scoring, higher score is less lonely)	0.035	-0.030	0.014	0.017	-0.115	0.000	0.001	-0.021	-0.003	-0.066
Paid work during the school year	-0.089	0.245	0.013	-0.055	0.142	-0.053	0.151	0.037	-0.002	0.116
African Americans						***Asian Americans***				
wtd. N	4329	4310	4308	4291	4288	1341	1335	1331	1334	1333
High School GPA	0.049	0.000	0.033	0.017	-0.032	0.165	-0.072	-0.005	-0.077	-0.038
4-Year College Plans	0.033	-0.058	-0.040	0.056	-0.095	0.099	-0.084	0.003	-0.014	-0.090
30-Day Cigarette Smoking	0.002	0.047	-0.001	-0.009	0.020	-0.067	0.155	0.007	0.056	0.001
Heavy Drinking--last 2 wks	0.017	0.055	-0.001	0.037	0.008	-0.050	0.174	0.083	0.040	-0.015
12-Month Marijuana Use	-0.080	0.010	-0.040	0.039	-0.013	-0.145	0.054	-0.049	0.118	-0.076
12-Month Cocain Use	-0.010	0.018	-0.010	0.011	-0.020	-0.076	0.033	-0.050	0.034	0.018
Evenings Out per week	0.079	0.067	0.063	0.074	0.011	-0.036	0.060	-0.016	0.209	-0.055
Materialism Index	-0.062	-0.014	-0.025	0.160	0.048	-0.086	-0.028	-0.048	0.207	0.047
Locus of Control Index (collapsed scoring)	-0.113	-0.142	-0.104	0.024	-0.130	0.047	-0.057	-0.027	-0.012	-0.165
Self-esteem Index (collapsed scoring)	-0.058	-0.088	-0.080	0.064	-0.080	0.113	0.023	0.053	0.010	-0.070
Loneliness Index (collapsed scoring, higher score is less lonely)	0.017	-0.050	-0.026	0.010	-0.081	0.062	0.023	0.001	-0.007	-0.119
Paid work during the school year	-0.024	0.120	0.028	0.007	0.056	-0.071	0.168	-0.010	0.074	0.135

*Weighted N's shown here are for the correlation between high school GPA and the saving/spending variables. N's for other correlations vary slightly. All respondents had to report saving/spending more than "None" on 1 of the 5 use of earnings items.

Table 2: Comparison of means on key indicators of academic achievement and plans, substance use, and attitudes between those who use/save more than 41% of their earnings from part-time work during the school year for specific purposes with those who do not use/save more than 41% of their earnings for those purposes.

					Use of Earnings														
					Save 41% or more for future education			Use/Save 41% or more for a car			Save 41% or more for other purposes			Spend 41% or more for yourself			Use 41% or more for your family		
					Yes	No	diff (yes - no)	Yes	No	diff (yes - no)	Yes	No	diff (yes - no)	Yes	No	diff (yes - no)	Yes	No	diff (yes - no)
	Grand	Standard		Wtd. Yes/No[a]	11,188	52,410	as % of	16,557	46,916	as % of	11,045	52,240	as % of	37,153	26,202	as % of	7,468	55,715	as % of
Indicators	Mean	Deviation	Scale	% Yes/No	17.6%	82.4%	SD	26.1%	73.9%	SD	17.5%	82.6%	SD	58.6%	41.4%	SD	11.8%	88.2%	SD
12th Grade GPA	6.04	1.98	1-9	Bivariate	6.53	5.94	29.6%	5.83	6.12	-14.3%	6.07	6.04	1.6%	5.94	6.19	-12.5%	5.49	6.12	-31.7%
				Adjusted[b]	6.37	5.97	20.1%	6.00	6.06	-2.9%	6.06	6.04	1.1%	5.98	6.14	-8.5%	5.81	6.08	-13.4%
4-Year College Plans	3.11	1.09	1-4	Bivariate	3.37	3.05	29.1%	2.92	3.17	-23.1%	3.08	3.11	-3.5%	3.11	3.11	0.1%	2.81	3.15	-30.5%
				Adjusted[b]	3.26	3.07	17.4%	3.03	3.14	-9.9%	3.04	3.12	-7.7%	3.11	3.11	-0.5%	2.95	3.13	-16.1%
Number of Cigarettes / 30 day	1.66	1.23	1-7	Bivariate	1.46	1.70	-19.6%	1.79	1.61	14.4%	1.59	1.67	-6.9%	1.71	1.59	9.3%	1.74	1.65	7.9%
				Adjusted[b]	1.52	1.69	-13.9%	1.68	1.65	2.9%	1.59	1.67	-6.4%	1.69	1.61	6.8%	1.73	1.65	6.4%
Any Daily Cigarette Use / 30 day	0.19	0.39	0-1.0	Bivariate	0.13	0.20	-18.8%	0.22	0.17	11.9%	0.16	0.19	-7.1%	0.20	0.17	8.2%	0.21	0.18	6.9%
				Adjusted[b]	0.14	0.20	-13.6%	0.19	0.19	1.7%	0.17	0.19	-6.5%	0.20	0.17	5.9%	0.21	0.18	5.7%
Heavy Drinking / 2 wks	1.78	1.28	1-6	Bivariate	1.64	1.80	-13.0%	1.93	1.72	16.2%	1.75	1.78	-2.2%	1.84	1.68	12.7%	1.74	1.78	-2.6%
				Adjusted[b]	1.70	1.79	-7.1%	1.82	1.76	4.6%	1.76	1.78	-1.0%	1.83	1.70	9.4%	1.78	1.77	0.4%
Any Heavy Drinking / 2 wks	0.34	0.47	0-1.0	Bivariate	0.28	0.35	-15.2%	0.39	0.32	14.4%	0.31	0.34	-5.5%	0.36	0.30	13.1%	0.29	0.34	-10.6%
				Adjusted[b]	0.30	0.34	-9.9%	0.35	0.33	3.8%	0.32	0.34	-3.8%	0.36	0.31	10.2%	0.32	0.34	-4.8%
Annual Marijuana Use	2.21	1.96	1-7	Bivariate	1.86	2.29	-21.8%	2.32	2.17	7.4%	2.07	2.24	-8.9%	2.34	2.03	16.0%	2.17	2.21	-2.3%
				Adjusted[b]	1.95	2.27	-16.3%	2.17	2.23	-2.8%	2.07	2.24	-8.9%	2.30	2.08	11.1%	2.13	2.22	-4.5%
Any Annual Marijuana Use	0.37	0.48	0-1.0	Bivariate	0.28	0.39	-23.0%	0.40	0.36	7.2%	0.33	0.38	-11.3%	0.41	0.32	17.0%	0.35	0.37	-4.7%
				Adjusted[b]	0.30	0.39	-17.9%	0.37	0.37	-1.7%	0.33	0.38	-11.0%	0.40	0.34	12.4%	0.35	0.38	-6.0%
Annual Cocaine Use	1.17	0.74	1-7	Bivariate	1.11	1.18	-9.6%	1.20	1.16	4.7%	1.14	1.18	-4.7%	1.19	1.14	7.3%	1.18	1.17	2.2%
				Adjusted[b]	1.13	1.18	-5.9%	1.16	1.17	-1.1%	1.14	1.18	-5.0%	1.18	1.15	4.2%	1.16	1.17	-1.0%
Any Annual Cocaine Use	0.07	0.26	0-1.0	Bivariate	0.05	0.08	-12.3%	0.08	0.07	3.4%	0.06	0.08	-6.6%	0.08	0.06	8.4%	0.08	0.07	1.8%
				Adjusted[b]	0.06	0.08	-8.0%	0.07	0.08	-2.8%	0.06	0.08	-6.2%	0.08	0.07	5.1%	0.07	0.07	-0.2%
Annual Use of Illicits other than MJ	0.22	0.42	0-1.0	Bivariate	0.16	0.24	-17.5%	0.25	0.21	9.2%	0.20	0.23	-7.1%	0.24	0.19	11.8%	0.22	0.22	-1.1%
				Adjusted[b]	0.18	0.23	-11.8%	0.23	0.22	0.5%	0.20	0.23	-6.4%	0.24	0.20	8.0%	0.22	0.22	-1.9%
Materialism Index	2.93	0.56	1-5	Bivariate	2.88	2.94	-11.4%	2.93	2.93	0.7%	2.90	2.94	-6.4%	3.00	2.83	31.6%	3.00	2.92	14.7%
				Adjusted[b]	2.89	2.94	-7.9%	2.94	2.93	1.7%	2.90	2.94	-7.2%	2.99	2.84	26.0%	2.92	2.93	-2.5%
Locus of Control Index	2.47	0.41	1-3	Bivariate	2.48	2.46	4.3%	2.40	2.49	-20.9%	2.42	2.48	-14.4%	2.46	2.47	-2.3%	2.28	2.49	-50.9%
				Adjusted[b]	2.46	2.47	-1.5%	2.43	2.48	-12.8%	2.42	2.48	-12.7%	2.47	2.47	-1.2%	2.34	2.48	-34.0%
Self-esteem Index	2.66	0.44	1-3	Bivariate	2.67	2.66	4.1%	2.64	2.67	-6.1%	2.64	2.66	-4.4%	2.66	2.66	-0.3%	2.54	2.67	-30.2%
				Adjusted[b]	2.66	2.66	0.6%	2.65	2.66	-3.8%	2.64	2.66	-4.9%	2.66	2.66	0.6%	2.57	2.67	-22.9%
Loneliness and Social Support Index	2.42	0.46	1-3	Bivariate	2.43	2.42	2.0%	2.41	2.43	-4.4%	2.41	2.42	-3.3%	2.43	2.41	3.9%	2.30	2.44	-30.3%
				Adjusted[b]	2.42	2.42	-0.7%	2.41	2.42	-2.6%	2.40	2.42	-4.2%	2.43	2.41	3.8%	2.33	2.43	-22.5%

[a]The weighted N shown here is the maximum possible weighted N. Each outcome has some missing data and the numbers of weighted cases used in the analyses are slightly less than the maximum possible number.

[b]Adjusted estimates derived from MCA controlling for region, number of parents, mother's paid job, student earnings from a paid job, student income from other sources, gender, race, parent education level index (treated as a covariate), truancy (treated as a covariate), and year of administration (treated as a covariate).

Table 3A: Bivariate and standardized multivariate (OLS) estimates of the relationship between hours of paid work during the school year and outcomes (row entries), contrasting those who do and do not save 41% or more and those who do and do not save 61% or more of earnings for **future education**.[a] High school seniors, working for pay during the school year, 1981-2011

	SAVE 41% or more for COLLEGE				**DO NOT SAVE 41% or more for COLLEGE**				**SAVE 61% or more for COLLEGE**				**DO NOT SAVE 61% or more for COLLEGE**			
	Bivariate		Multivariate		Bivariate		Multivariate		Bivariate		Multivariate		Bivariate		Multivariate	
High School GPA	-0.191	***	-0.107	***	-0.156	***	-0.073	***	-0.188	***	-0.073	**	-0.161	***	-0.081	***
4-Year College Plans	-0.173	***	-0.104	***	-0.184	***	-0.120	***	-0.183	***	-0.108	***	-0.184	***	-0.119	***
30-Day Cigarette Smoking	0.159	***	0.072	***	0.149	***	0.077	***	0.152	***	0.054	*	0.152	***	0.078	***
Heavy Drinking -- last 2 wks	0.094	***	0.018		0.088	***	0.027	**	0.094	***	0.014		0.089	***	0.025	**
12-Month Marijuana Use	0.099	***	0.033	*	0.094	***	0.030	***	0.099	***	0.030		0.095	***	0.031	***
12-Month Cocaine Use	0.055	**	-0.023		0.068	***	0.020	*	-0.003		-0.089		0.073	***	0.023	**

[a] Analyses are limited to those who held paid employment during the school year. Bivariate statistics are Pearson correlations. Multivariate estimates are derived from OLS regressions controlling for hours of paid work during the school year, parent education level (index) and truancy (index), all treated as continuous predictors; and region, number of parents in the home, mother's paid job status, student earnings from a paid job, student income from other sources, gender, race, and year of administration (grouped into five 5-year groups plus two 3-year groups), all treated as categorial predictors. All tests for significance adjusted to account for effects of the complex sample design. * p<.05; ** p<.01; *** p<.001

Table 3B: Bivariate and standardized multivariate (OLS) estimates of the relationship between hours of paid work during the school year and outcomes (row entries), contrasting those who do and do not save 41% or more of earnings for **future education**.[a] High school seniors, working for pay during the school year, 1981-2011

	SAVE 41% or more for COLLEGE				**DO NOT SAVE 41% or more for COLLEGE**			
	TOTAL SAMPLE				*TOTAL SAMPLE*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	-0.191	-0.107	-0.110	<.0001	-0.156	-0.073	-0.081	<.0001
College Plans	-0.173	-0.104	-0.056	<.0001	-0.184	-0.120	-0.075	<.0001
30-Day Cigarette Smoking	0.159	0.072	0.043	0.0002	0.149	0.077	0.057	<.0001
Any Daily Cigarette Smoking	0.148	0.070	0.014	0.0001	0.132	0.065	0.015	<.0001
Heavy Drinking -- last 2 weeks	0.094	0.018	0.012	0.3296	0.088	0.027	0.020	0.0016
Any Heavy Drinking -- last 2 weeks	0.072	0.009	0.002	0.5576	0.076	0.026	0.007	0.001
Annual Marijuana Use	0.099	0.033	0.033	0.0663	0.094	0.030	0.035	0.0002
Any Annual Marijuana Use	0.097	0.045	0.011	0.0124	0.085	0.032	0.009	<.0001
Annual Cocaine Use	0.055	-0.023	-0.008	0.3946	0.068	0.020	0.009	0.0349
Any Annual Cocaine Use	0.059	-0.001	0.000	0.8743	0.075	0.029	0.005	0.0008
Any Illicit Drugs Use Other than Marijuana	0.106	0.052	0.011	0.0063	0.093	0.055	0.014	<.0001
Evenings out	0.012	-0.054	-0.040	0.0019	-0.029	-0.061	-0.045	<.0001
Materialism Index	0.076	0.000	0.000	0.9685	0.031	-0.007	-0.002	0.3671
Locus of Control Index (collapsed version)	-0.164	-0.071	-0.016	<.0001	-0.107	-0.040	-0.009	<.0001
Self-esteem Index (collapsed version)	-0.083	-0.052	-0.012	0.0014	-0.046	-0.027	-0.007	0.0006
Social Support/Loneliness Index (collapsed version)	-0.066	-0.050	-0.012	0.0037	-0.056	-0.043	-0.011	<.0001

Table 3C Part 1: Savings for future education. Bivariate and standardized multivariate (OLS) estimates of the relationship between hours of paid work during the school year and outcomes (row entries), contrasting those who do and do not save 41% or more of earnings for **future education**.[a] High school seniors, working for pay during the school year, 1981-2011 by gender and race/ethnicity

	SAVE 41% or more for COLLEGE				**DO NOT SAVE 41% or more for COLLEGE**			
	MALES				*MALES*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	-0.190	-0.112	-0.115	<.0001	-0.154	-0.078	-0.084	<.0001
College Plans	-0.177	-0.130	-0.071	<.0001	-0.218	-0.163	-0.100	<.0001
30-Day Cigarette Smoking	0.168	0.052	0.033	0.0706	0.152	0.077	0.056	<.0001
Any Daily Cigarette Smoking	0.152	0.051	0.010	0.0568	0.127	0.058	0.013	<.0001
Heavy Drinking -- last 2 weeks	0.096	0.008	0.006	0.7688	0.085	0.012	0.009	0.347
Any Heavy Drinking -- last 2 weeks	0.071	-0.001	0.000	0.9657	0.075	0.016	0.004	0.1695
Annual Marijuana Use	0.090	0.013	0.014	0.5957	0.065	0.006	0.007	0.5897
Any Annual Marijuana Use	0.108	0.041	0.010	0.094	0.057	0.011	0.003	0.3078
Annual Cocaine Use	0.054	-0.054	-0.021	0.2234	0.048	-0.008	-0.004	0.6005
Any Annual Cocaine Use	0.057	-0.024	-0.003	0.4168	0.058	0.005	0.001	0.6672
Any Illicit Drugs Use Other than Marijuana	0.086	0.041	0.009	0.1544	0.068	0.024	0.006	0.0635
Evenings out	0.045	-0.026	-0.019	0.3202	-0.024	-0.058	-0.042	<.0001
Materialism Index	0.104	0.029	0.009	0.252	0.034	0.009	0.003	0.4404
Locus of Control Index (collapsed version)	-0.174	-0.074	-0.018	0.0007	-0.085	-0.010	-0.002	0.4198
Self-esteem Index (collapsed version)	-0.080	-0.045	-0.010	0.0842	-0.047	-0.006	-0.001	0.6379
Social Support/Loneliness Index (collapsed version)	-0.061	-0.045	-0.011	0.0656	-0.037	-0.013	-0.003	0.2506
	FEMALES				*FEMALES*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	-0.187	-0.107	-0.108	<.0001	-0.150	-0.073	-0.080	<.0001
College Plans	-0.170	-0.087	-0.047	0.0012	-0.140	-0.079	-0.050	<.0001
30-Day Cigarette Smoking	0.134	0.063	0.036	0.0076	0.145	0.079	0.058	<.0001
Any Daily Cigarette Smoking	0.128	0.057	0.011	0.0172	0.136	0.073	0.018	<.0001
Heavy Drinking -- last 2 weeks	0.083	0.048	0.026	0.0572	0.075	0.047	0.031	<.0001
Any Heavy Drinking -- last 2 weeks	0.063	0.026	0.006	0.2666	0.063	0.037	0.010	0.0005
Annual Marijuana Use	0.099	0.047	0.041	0.0424	0.116	0.059	0.064	<.0001
Any Annual Marijuana Use	0.077	0.045	0.011	0.0556	0.107	0.057	0.016	<.0001
Annual Cocaine Use	0.071	0.024	0.007	0.5746	0.086	0.050	0.022	<.0001
Any Annual Cocaine Use	0.071	0.032	0.003	0.3478	0.090	0.054	0.008	<.0001
Any Illicit Drugs Use Other than Marijuana	0.123	0.069	0.014	0.0072	0.112	0.085	0.021	<.0001
Evenings out	-0.026	-0.078	-0.058	0.0015	-0.047	-0.061	-0.047	<.0001
Materialism Index	0.053	-0.046	-0.014	0.0502	0.042	-0.025	-0.008	0.0324
Locus of Control Index (collapsed version)	-0.148	-0.072	-0.016	0.001	-0.120	-0.068	-0.016	<.0001
Self-esteem Index (collapsed version)	-0.094	-0.060	-0.015	0.0056	-0.051	-0.045	-0.012	<.0001
Social Support/Loneliness Index (collapsed version)	-0.076	-0.062	-0.016	0.006	-0.077	-0.071	-0.019	<.0001

Analyses are limited to those who held paid employment during the school year. Bivariate statistics are Pearson correlations. Multivariate estimates are derived from OLS regressions controlling for: hours of paid work during the school year, parent education level (index) and truancy (index), all treated as continuous predictors; and region, number of parents in the home, mother's paid job status, student earnings from a paid job, student income from other sources, gender (excluded when analyses were conducted separately by gender), race (excluded when analyses were conducted separately by race), and year of administration (grouped into five 5-year groups plus two 3-year groups), all treated as categorial predictors. All tests for significance adjusted to account for effects of the complex sample design. * p<.05; ** p<.01; *** p<.001

Table 3C Part 2: Savings for future education. Bivariate and standardized multivariate (OLS) estimates of the relationship between hours of paid work during the school year and outcomes (row entries), contrasting those who do and do not save 41% or more of earnings for **future education**.[a] High school seniors, working for pay during the school year, 1981-2011 by gender and race/ethnicity

	SAVE 41% or more for COLLEGE				DO NOT SAVE 41% or more for COLLEGE			
	WHITES				*WHITES*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	-0.211	-0.141	-0.144	<.0001	-0.169	-0.076	-0.084	<.0001
College Plans	-0.199	-0.135	-0.074	<.0001	-0.218	-0.140	-0.090	<.0001
30-Day Cigarette Smoking	0.186	0.063	0.039	0.0073	0.176	0.084	0.065	<.0001
Any Daily Cigarette Smoking	0.170	0.059	0.012	0.0088	0.156	0.072	0.018	<.0001
Heavy Drinking -- last 2 weeks	0.122	0.016	0.012	0.4117	0.108	0.040	0.031	<.0001
Any Heavy Drinking -- last 2 weeks	0.102	0.006	0.002	0.7146	0.094	0.037	0.010	0.0001
Annual Marijuana Use	0.123	0.030	0.030	0.1493	0.105	0.025	0.029	0.0085
Any Annual Marijuana Use	0.113	0.030	0.008	0.1423	0.099	0.034	0.010	0.0002
Annual Cocaine Use	0.079	-0.024	-0.008	0.4577	0.079	0.022	0.010	0.0317
Any Annual Cocaine Use	0.083	-0.001	0.000	0.8977	0.085	0.025	0.004	0.0165
Any Illicit Drugs Use Other than Marijuana	0.137	0.060	0.013	0.0111	0.115	0.060	0.015	<.0001
Evenings out	0.026	-0.060	-0.044	0.0028	-0.024	-0.054	-0.040	<.0001
Materialism Index	0.058	-0.029	-0.009	0.1652	0.017	-0.012	-0.004	0.2234
Locus of Control Index (collapsed version)	-0.171	-0.086	-0.019	<.0001	-0.127	-0.058	-0.013	<.0001
Self-esteem Index (collapsed version)	-0.101	-0.059	-0.014	0.0037	-0.058	-0.036	-0.009	0.0002
Social Support/Loneliness Index (collapsed version)	-0.079	-0.067	-0.017	0.0012	-0.066	-0.052	-0.013	<.0001
	AFRICAN AMERICANS				*AFRICAN AMERICANS*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	0.027	0.013	0.012	0.7408	-0.036	-0.027	-0.028	0.2707
College Plans	0.025	0.044	0.024	0.3847	-0.011	-0.010	-0.006	0.7112
30-Day Cigarette Smoking	-0.009	-0.040	-0.018	0.2408	0.061	0.055	0.023	0.0451
Any Daily Cigarette Smoking	-0.020	-0.054	-0.007	0.1199	0.065	0.059	0.009	0.0311
Heavy Drinking -- last 2 weeks	-0.065	-0.046	-0.026	0.3578	0.012	-0.004	-0.002	0.897
Any Heavy Drinking -- last 2 weeks	-0.075	-0.082	-0.016	0.1148	0.005	-0.013	-0.003	0.6205
Annual Marijuana Use	-0.016	-0.006	-0.005	0.9045	0.063	0.060	0.060	0.0224
Any Annual Marijuana Use	-0.020	-0.008	-0.002	0.8823	0.050	0.052	0.014	0.0287
Annual Cocaine Use	-0.085	-0.079	-0.015	0.1065	0.027	0.041	0.010	0.0294
Any Annual Cocaine Use	-0.056	-0.070	-0.005	0.0746	0.015	0.043	0.004	0.1624
Any Illicit Drugs Use Other than Marijuana	-0.047	-0.034	-0.005	<.0001	0.003	0.043	0.007	0.1302
Evenings out	-0.066	-0.108	-0.085	0.0241	-0.003	-0.018	-0.014	0.4515
Materialism Index	0.089	0.045	0.013	0.3552	0.051	0.022	0.006	0.3621
Locus of Control Index (collapsed version)	-0.030	-0.025	-0.006	0.5293	0.012	0.050	0.012	0.0428
Self-esteem Index (collapsed version)	0.036	0.037	0.008	0.3587	0.027	0.027	0.006	0.285
Social Support/Loneliness Index (collapsed version)	-0.022	-0.029	-0.006	0.4976	0.022	0.016	0.004	0.4782
	HISPANICS				*HISPANICS*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	-0.059	-0.077	-0.076	0.1992	-0.120	-0.042	-0.045	0.119
College Plans	-0.123	-0.119	-0.064	0.031	-0.063	-0.018	-0.010	0.5186
30-Day Cigarette Smoking	0.168	0.144	0.091	<.0001	0.041	0.024	0.013	0.3753
Any Daily Cigarette Smoking	0.148	0.156	0.028	<.0001	0.033	0.010	0.002	0.7334
Heavy Drinking -- last 2 weeks	0.124	0.112	0.072	0.0883	0.007	-0.068	-0.046	0.037
Any Heavy Drinking -- last 2 weeks	0.076	0.099	0.022	0.1429	0.024	-0.035	-0.009	0.2022
Annual Marijuana Use	0.092	0.090	0.082	0.1418	0.038	0.025	0.025	0.3854
Any Annual Marijuana Use	0.104	0.105	0.025	0.0649	0.006	-0.016	-0.004	0.56
Annual Cocaine Use	0.031	0.017	0.009	0.8402	0.021	-0.023	-0.011	0.6422
Any Annual Cocaine Use	0.016	0.052	0.008	0.4582	0.050	0.026	0.004	0.433
Any Illicit Drugs Use Other than Marijuana	0.018	0.040	0.008	0.5148	0.004	-0.017	-0.004	0.563
Evenings out	-0.031	-0.029	-0.021	0.6486	-0.060	-0.121	-0.089	<.0001
Materialism Index	0.035	0.090	0.024	0.1617	0.061	-0.005	-0.001	0.8786
Locus of Control Index (collapsed version)	-0.159	-0.076	-0.018	0.1473	-0.029	-0.012	-0.003	0.6529
Self-esteem Index (collapsed version)	-0.010	-0.028	-0.006	0.6437	0.011	0.011	0.003	0.6829
Social Support/Loneliness Index (collapsed version)	0.033	0.055	0.012	0.3383	-0.007	-0.005	-0.001	0.8426
	ASIAN AMERICANS				*ASIAN AMERICANS*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	-0.202	-0.071	-0.072	0.3643	-0.176	-0.141	-0.159	0.002
College Plans	-0.192	-0.287	-0.113	0.008	-0.121	-0.105	-0.048	0.0228
30-Day Cigarette Smoking	0.134	0.062	0.028	0.5559	0.186	0.106	0.059	0.0087
Any Daily Cigarette Smoking	0.107	0.025	0.004	0.7907	0.179	0.102	0.020	0.0203
Heavy Drinking -- last 2 weeks	0.053	0.119	0.067	0.1486	0.169	0.117	0.065	0.0158
Any Heavy Drinking -- last 2 weeks	0.000	0.090	0.017	0.2725	0.160	0.113	0.027	0.0176
Annual Marijuana Use	0.064	0.031	0.019	0.6485	0.123	0.048	0.045	0.2443
Any Annual Marijuana Use	0.138	0.129	0.028	0.0789	0.158	0.092	0.024	0.0244
Annual Cocaine Use	-0.010	0.082	0.022	0.2514	0.036	-0.012	-0.005	0.8081
Any Annual Cocaine Use	0.024	0.140	0.011	0.1222	0.043	-0.032	-0.004	0.469
Any Illicit Drugs Use Other than Marijuana	0.098	0.132	0.027	0.0727	0.098	0.042	0.009	0.3613
Evenings out	0.101	0.187	0.143	0.0543	0.071	-0.014	-0.011	0.7143
Materialism Index	0.153	0.082	0.027	0.2812	0.091	0.086	0.027	0.0747
Locus of Control Index (collapsed version)	-0.088	-0.019	-0.004	0.814	-0.107	-0.107	-0.024	0.0207
Self-esteem Index (collapsed version)	0.086	0.128	0.033	0.1267	-0.051	-0.064	-0.018	0.1317
Social Support/Loneliness Index (collapsed version)	0.060	0.110	0.028	0.21	-0.046	-0.039	-0.011	0.3706

[a] Analyses are limited to those who held paid employment during the school year. Bivariate statistics are Pearson correlations. Multivariate estimates are derived from OLS regressions controlling for: hours of paid work during the school year, parent education level (index) and truancy (index), all treated as continuous predictors; and region, number of parents in the home, mother's paid job status, student earnings from a paid job, student income from other sources, gender (excluded when analyses were conducted separately by gender), race (excluded when analyses were conducted separately by race), and year of administration (grouped into five 5-year groups plus two 3-year groups), all treated as categorial predictors. All tests for significance adjusted to account for effects of the complex sample design. * p<.05; ** p<.01; *** p<.001

Table 4: Correlations between hours of paid work during high school (modal age 18) and cigarette use and academic attainment at modal ages 18, 21/22, and 29/30 for class years 1981-1999, total sample, and contrasting those who did and did not save 41% or more of their earnings for future college education.

Total Sample

	N	Mean	St Dev	Product-moment correlations with paid work at modal age 18	95% Confidence interval	
Paid work hours at modal age 18*	5218	2.413	1.220			
GPA at modal age 18	5190	5.993	1.714	-0.147	-0.171	-0.118
Years of schooling at modal age 21/22	3573	3.778	1.226	-0.270	-0.290	-0.229
Years of schooling at modal age 29/30	2677	4.789	1.717	-0.260	-0.287	-0.216
30-day cigarette use at modal age 18	5177	1.724	1.140	0.168	0.141	0.194
30-day cigarette use at modal age 21/22	3537	1.838	1.298	0.153	0.114	0.178
30-day cigarette use at modal age 29/30	2658	1.645	1.226	0.196	0.144	0.217

Saving 41% or more of earnings from part-time work for college: 17% of sample at senior year

	N	Mean	St Dev	Product-moment correlations with paid work at modal age 18	95% Confidence interval	
Paid work hours at modal age 18*	819	2.194	1.245			
GPA at modal age 18	814	6.505	1.712	-0.142	-0.209	-0.074
Years of schooling at modal age 21/22	595	4.280	1.129	-0.195	-0.271	-0.117
Years of schooling at modal age 29/30	465	5.493	1.575	-0.259	-0.342	-0.172
30-day cigarette use at modal age 18	813	1.464	0.965	0.210	0.143	0.275
30-day cigarette use at modal age 21/22	587	1.549	1.078	0.136	0.056	0.215
30-day cigarette use at modal age 29/30	463	1.369	0.963	0.124	0.033	0.213

Not saving 41% or more of earnings from part-time work for college: 83% of sample at senior year

	N	Mean	St Dev	Product-moment correlations with paid work at modal age 18	95% Confidence interval	
Paid work hours at modal age 18*	4399	2.459	1.212			
GPA at modal age 18	4376	5.886	1.700	-0.139	-0.167	-0.109
Years of Schooling at modal age 21/22	2978	3.667	1.217	-0.274	-0.307	-0.241
Years of Schooling at modal age 29/30	2212	4.626	1.713	-0.249	-0.288	-0.210
30-day cigarette use at modal age 18	4364	1.776	1.163	0.154	0.125	0.183
30-day cigarette use at modal age 21/22	2950	1.900	1.332	0.150	0.114	0.185
30-day cigarette use at modal age 29/30	2195	1.709	1.269	0.202	0.161	0.242

*For these analyses, the paid work hours variable was collapsed to include 1-15 hours per week in one level, and all other levels of work effort were maintained as shown in Appendix Table 2. This collapse was consistent with procedures in earlier analyses (Bachman, Staff, et al., 2011) in order to preserve linearity.

Figure 1A: Trends in percent of high school seniors who spend/save 41% or more of earnings, for class years 1981-2011

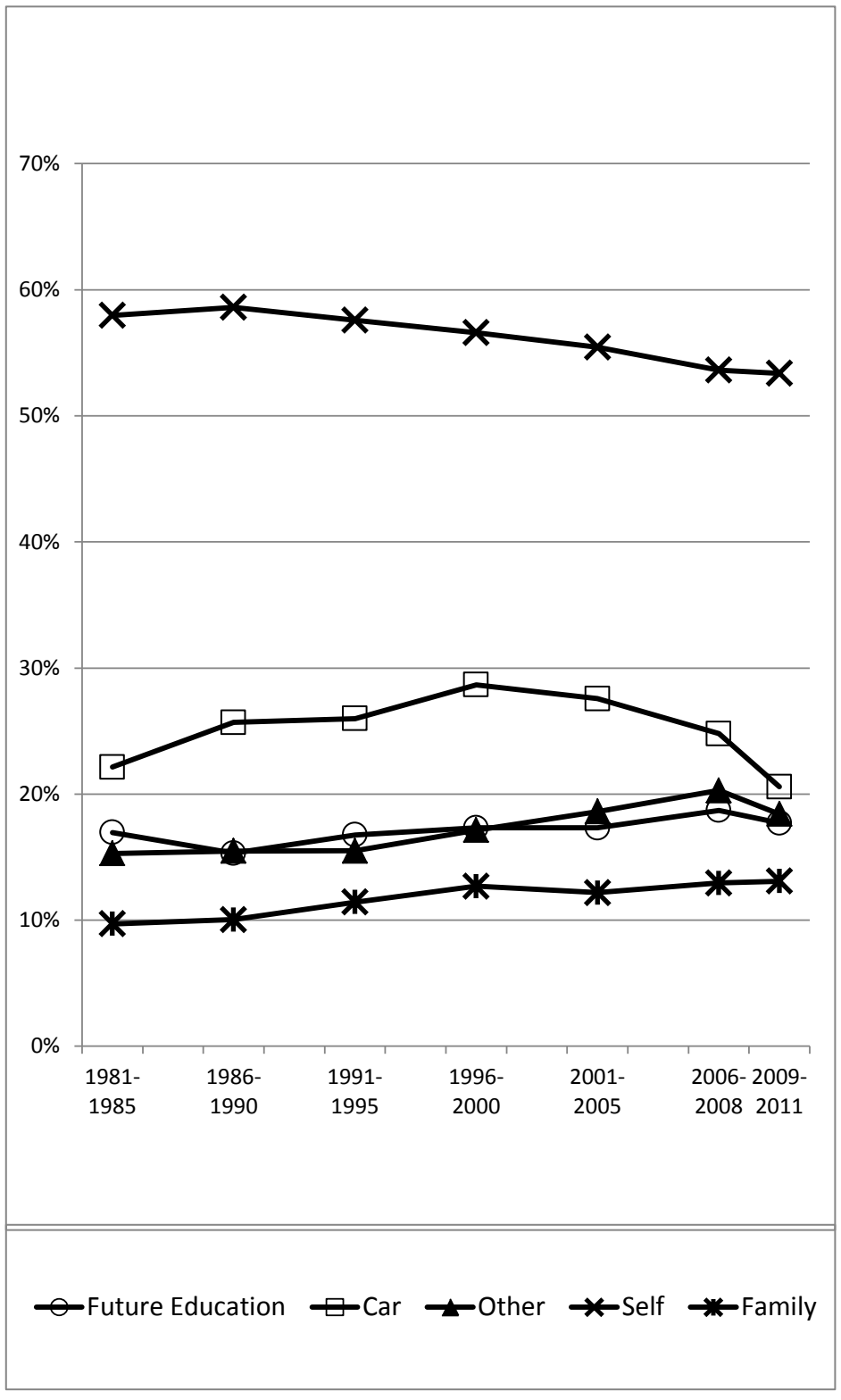


Figure 1B: Trends in percent of high school seniors who spend/save 41% or more of earnings, by gender, for class years 1981-2011

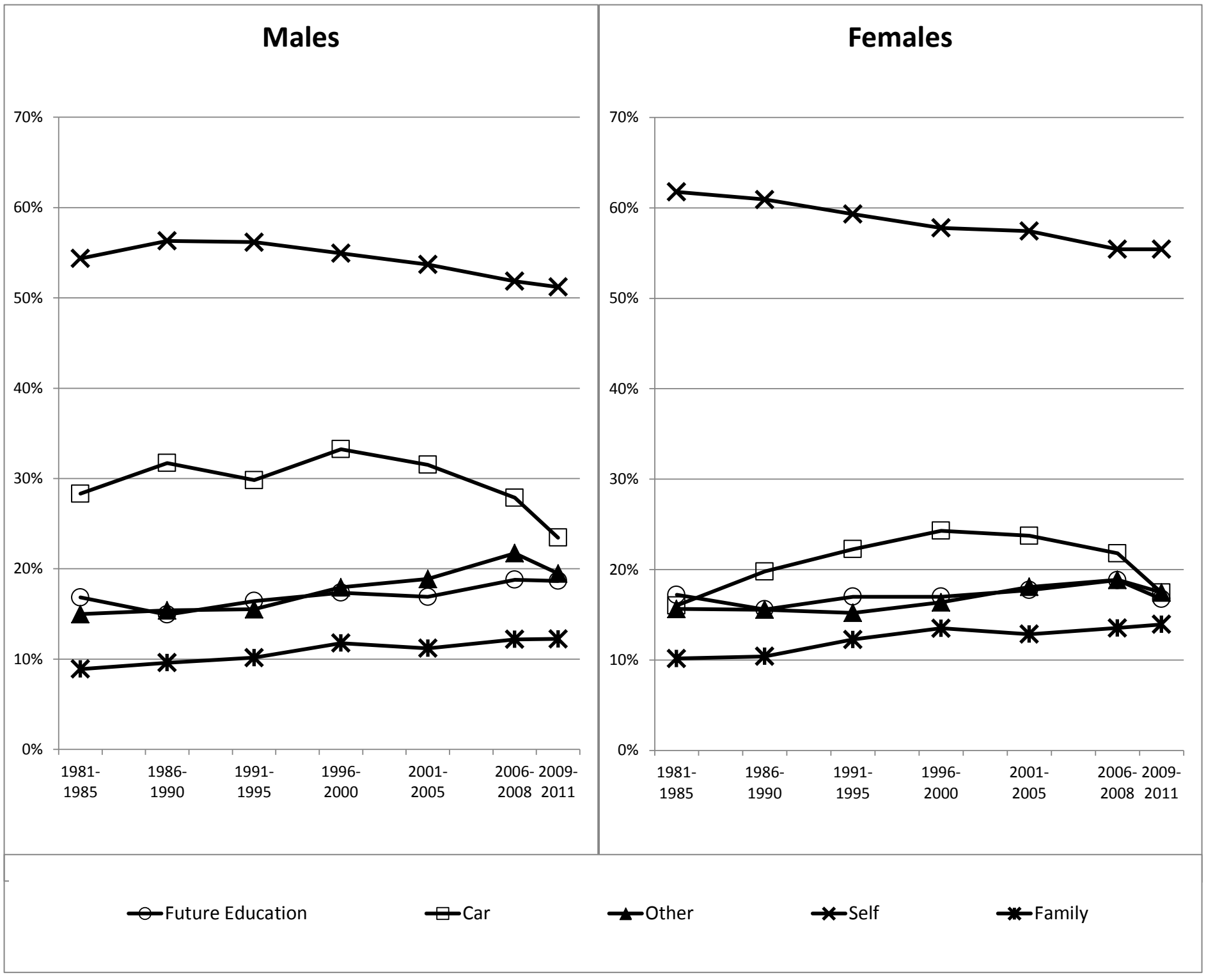
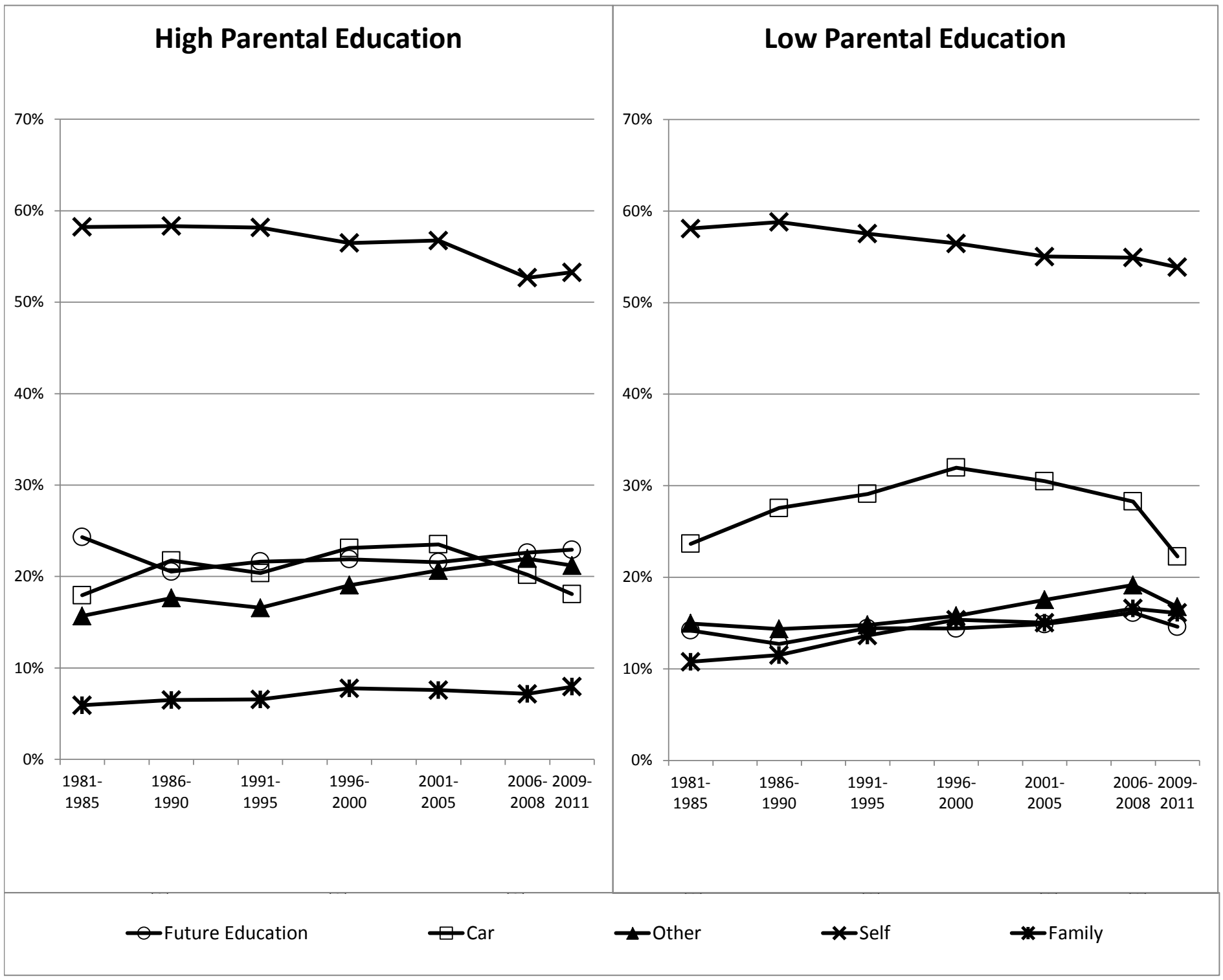


Figure 1C: Trends in percent of high school seniors who spend/save 41% or more of earnings, by parental education*, for class years 1981-2011



*Respondent's with scores of 4 or 5 (from the five category index of parental education) were High SES, all others were Low SES.

Figure 1D: Trends in percent of high school seniors who spend/save 41% or more of earnings, by gender and race/ethnicity, for class years 1981-2011

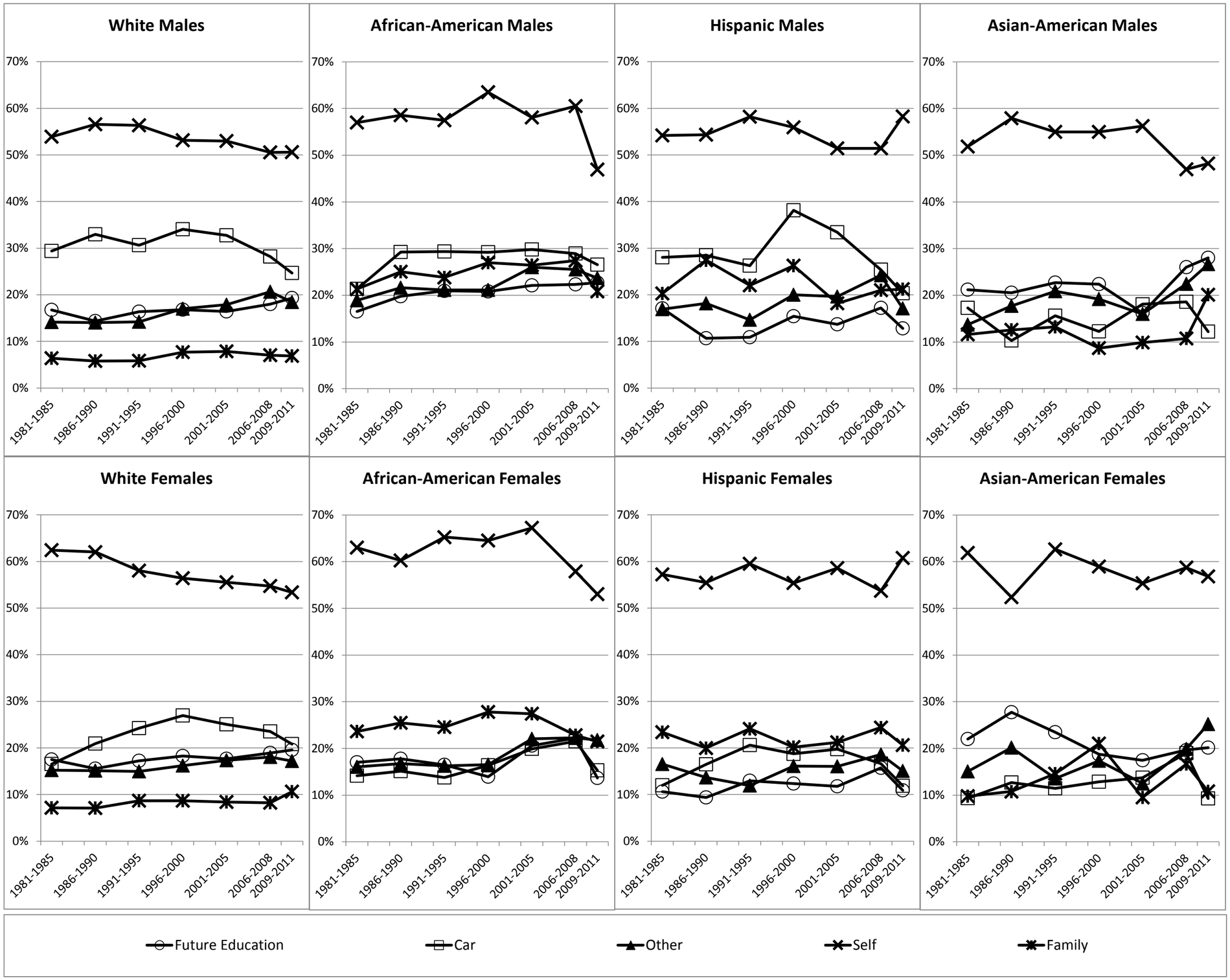
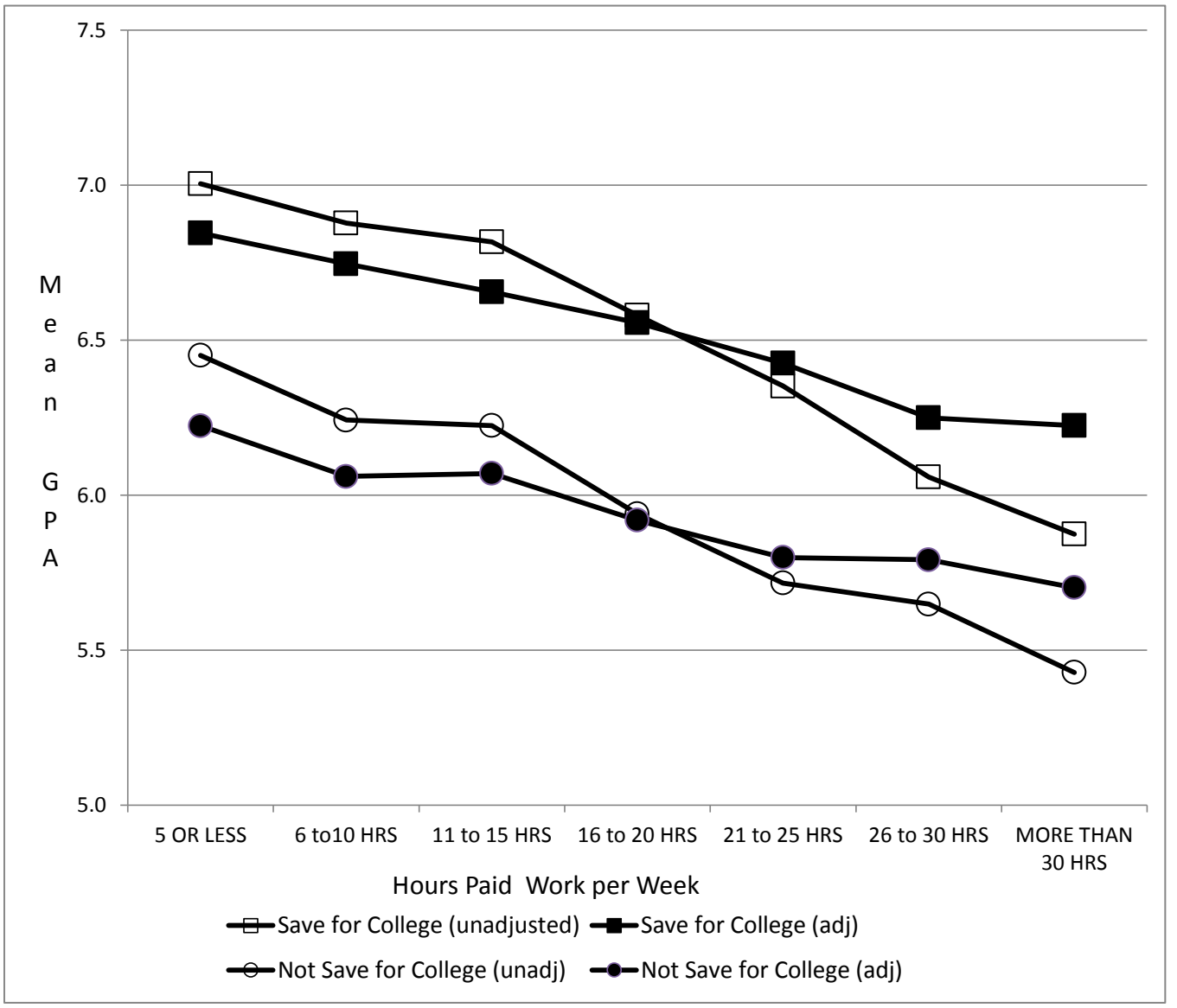


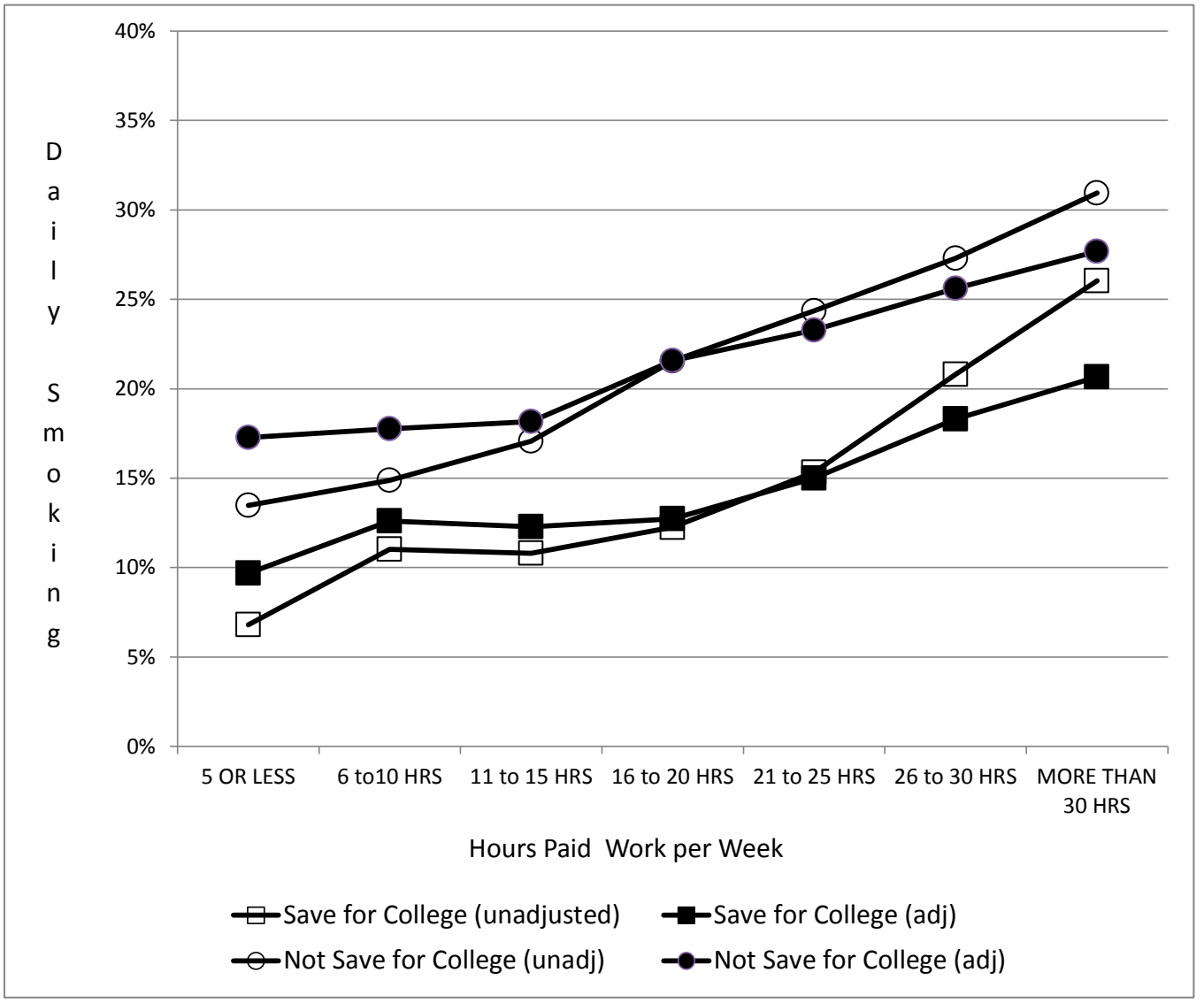
Figure 2: Mean GPA* by hours of paid work during the school year, high school seniors, 1981-2011: Saving 41% or more earnings for future education vs. not saving 41% or more earnings for future education (unadjusted and adjusted[a])



*GPA scale: 1=D (69 or below) . . . 5=B- (80-82) . . . 9=A (93-100)

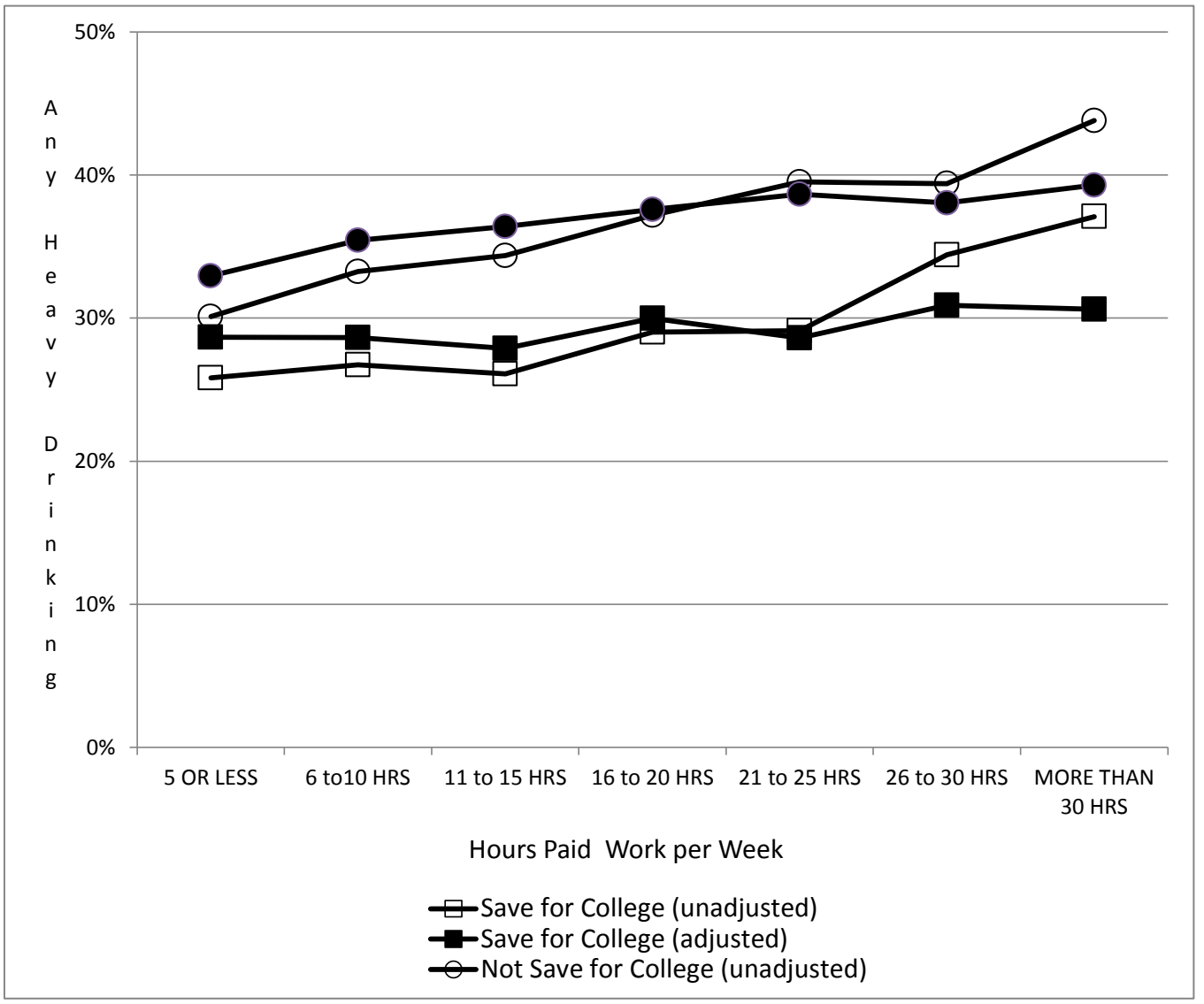
[a]Adjusted estimates derived from Multiple Classification Analysis (MCA). Controls for region, number of parents, mother's paid job, student earnings from a paid job, student income from other sources, gender, and race were treated as categorical factors. Parent education level (index), truancy, and year of administration were treated as continuous covariates.

Figure 3: Any daily cigarette smoking by hours of paid work during the school year, high school seniors, 1981-2011: Saving 41% or more earnings for future education vs. not saving 41% or more earnings for future education (unadjusted and adjusted[a])



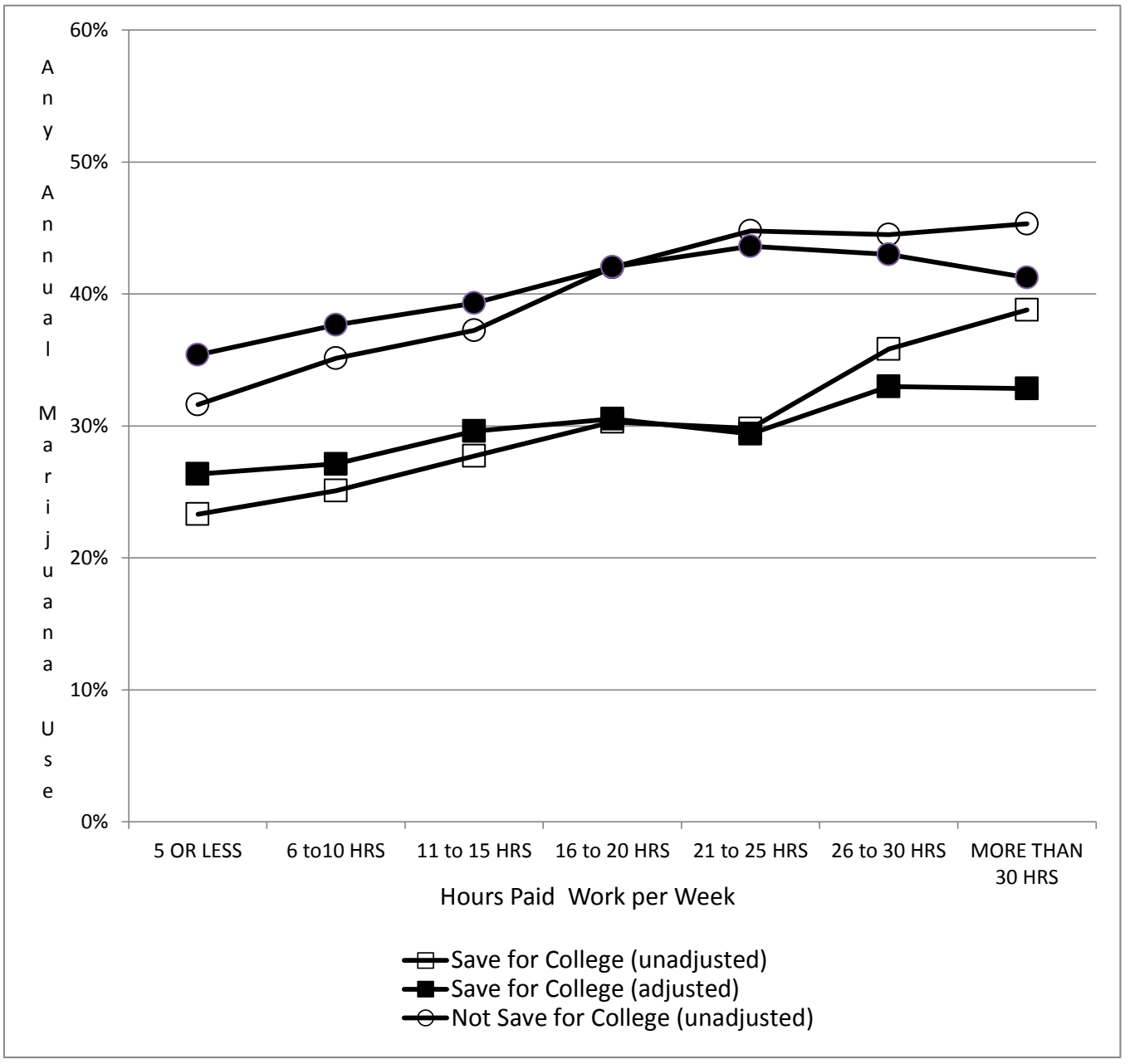
[a]Adjusted estimates derived from Multiple Classification Analysis (MCA). Controls for region, number of parents, mother's paid job, student earnings from a paid job, student income from other sources, gender, and race were treated as categorical factors. Parent education level (index), truancy, and year of administration were treated as continuous covariates.

Figure 4: Any heavy drinking in the last two weeks by hours of paid work during the school year, high school seniors, 1981-2011: Saving 41% or more earnings for future education vs. not saving 41% or more earnings for future education (unadjusted and adjusted[a])



[a]Adjusted estimates derived from Multiple Classification Analysis (MCA). Controls for region, number of parents, mother's paid job, student earnings from a paid job, student income from other sources, gender, and race were treated as categorical factors. Parent education level (index), truancy, and year of administration were treated as continuous covariates.

Figure 5: Any annual marijuana use by hours of paid work during the school year, high school seniors, 1981-2011: Saving 41% or more earnings for future education vs. not saving 41% or more earnings for future education (unadjusted and adjusted[a])



[a]Adjusted estimates derived from Multiple Classification Analysis (MCA). Controls for region, number of parents, mother's paid job, student earnings from a paid job, student income from other sources, gender, and race were treated as categorical factors. Parents' education level (index), truancy, and year of administration were treated as continuous covariates.

Appendix Table 1: Contrasting the use of earnings between respondents who reported paid work during the school year with those who reported paid work during the summers only. Respondents who report using 41% or more of earnings in various categories. High School Seniors, 1981-2011.

	Total Sample	Reporting Paid Work in the School-year Only	Reporting Paid Work in the Summer only
% Saving for future education	17.6	17.5	17.1
% Saving/spending on a car	26.1	30.7	13.1
% Saving for other long term purposes	17.5	17.9	15.8
% Saving/Spending on self	58.6	58.1	60.7
% Saving/Spending on family	11.8	11.7	11.1

Appendix Table 2: Question Texts and Response Categories

Use of Earnings from Paid Work (5 items with the same question stem and response categories)

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 to:

1 Savings for your future education
2 Savings or payments for a car or car expenses
3 Other savings for long-range purposes
4 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
5 Helping to pay family living expenses (groceries, housing, etc.)

1 None
2 A little (1-20%)
3 Some (21-40%)
4 About half (41-60%)
5 Most (61-80%)
6 Almost all (81-99%)
7 All

Work Grade 12

Hours of paid work is calculated by excluding all who say they receive no money (see the second question below) from a job.

On the average over the school year, how many hours per week do you work in a paid or unpaid job?

1 None
2 5 or less hours per week
3 6 to 10 hours per week
4 11 to 15 hours per week
5 16 to 20 hours per week
6 21 to 25 hours per week
7 26 to 30 hours per week
8 More than 30 hours per week

During an average week, how much money do you get from a job or other work?

1 None
2 $1 - 5
3 $6 - 10
4 $11 - 20
5 $21 - 35
6 $36 - 50
7 $51 - 75
8 $76 - 125
9 $126 -175
10 $176+

Appendix Table 2, Continued: Question Texts and Response Categories

Race/Ethnicity

The race/ethnicity variable is recoded from a question that asks respondents to describe themselves. The categories available to respondents have changed over the years, and the option to select more than one category was added in 2005. Full details can be found in Appendix B of Johnston et al. (2012). Here is the question as presented from 2005 to 2011. "Black or African-American" was coded "African-American"; "Mexican American or Chicano," "Cuban American," "Puerto Rican," and "Other Hispanic or Latino" were combined and coded "Hispanic"; "Asian American" was coded "Asian-American"; "American Indian or Alaska Native," "Native Hawaiian or Other Pacific Islander," and multiple selections were coded "Other race"; and "White (Caucasian)" was coded "White."

How do you describe yourself? (Select one or more responses.)

1 Black or African American
2 Mexican American or Chicano
3 Cuban American
4 Puerto Rican
5 Other Hispanic or Latino
6 Asian American
7 White (Caucasian)
8 American Indian or Alaska Native
9 Native Hawaiian or Other Pacific Islander

Parents' (combined) Education Level

Parents' Education Level is an average of the father and mother's data (see question text below). Each level (1-6, level 7 was treated as missing data) was multiplied by 10, summed with the response for the other parent, and divided by the number of parents for whom the respondent supplied data (thus, missing data was allowed on one variable). The resulting whole numbers (10, 15, 20, 30, 35, etc up to 60) produces an 11 point scale.

For some OLS regression and MCA analyses and related figures, the 11-category measure was bracketed to a 5 category measure:

1= 10, 15, and 20
2= 25 and 30
3= 35 and 40
4= 45 and 50
5= 55 and 60

For Figure 1C, respondent's with scores of 4 or 5 (from the five category index above) were High SES, all others were Low SES.

For some OLS regression and MCA analyses and related figures, the 11-category measure was bracketed to a 3-category measure: Low, Middle, and High SES. The 11-category measure was bracketed in the following manner:

Low SES = 10, 15, 20, 25, 30
Middle SES = 35, 40, 45, 50
High SES = 55, 60

Appendix Table 2, Continued: Question Texts and Response Categories

The next three questions ask about your parents. If you were raised mostly by foster parents, stepparents, or others, answer for them. For example, if you have both a stepfather and a natural father, answer for the one that was the most important in raising you.

What is the highest level of schooling your father completed?

1 Completed grade school or less
2 Some high school
3 Completed high school
4 Some college
5 Completed college
6 Graduate or professional school after college
7 Don't know, or does not apply

What is the highest level of schooling your mother completed?

1 Completed grade school or less
2 Some high school
3 Completed high school
4 Some college
5 Completed college
6 Graduate or professional school after college
7 Don't know, or does not apply

GPA

Which of the following best describes your average grade so far in high school?

9 A (93–100)
8 A- (90–92)
7 B+ (87–89)
6 B (83–86)
5 B- (80–82)
4 C+ (77–79)
3 C (73–76)
2 C- (70–72)
1 D (69 or below)

College Plans

How likely is it that you will graduate from college (four-year program)?

1 Definitely won’t
2 Probably won’t
3 Probably will
4 Definitely will

Appendix Table 2, Continued: Question Texts and Response Categories

Cigarette Use

How frequently have you smoked cigarettes during the past 30 days?

1 Not at all
2 Less than one cigarette per day
3 One to five cigarettes per day
4 About one-half pack per day
5 About one pack per day
6 About one and one-half packs per day
7 Two packs or more per day

Heavy Drinking

Think back over the LAST TWO WEEKS. How many times have you had five or more drinks in a row? (A "drink" is a glass of wine, a bottle of beer, a wine cooler, a shot glass of liquor, or a mixed drink.)

1 None
2 Once
3 Twice
4 Three to five times
5 Six to nine time
6 Ten or more times

Marijuana Use

On how many occasions (if any) have you used marijuana (weed, pot) or hashish (hash, hash oil) during the last 12 months?

1 0 occasions
2 1–2
3 3–5
4 6–9
5 10–19
6 20–39
7 40 or more

Region

Region is not supplied by the respondent. MTF samples divide the country into:

1 Northeast
2 North central
3 South
4 West

Urbanicity

Population Density is not supplied by the respondent. MTF samples divide respondents into 3 mutually exclusive groups based upon, and defined in terms of United States Census Metropolitan Statistical Areas (MSAs):

1 Large MSAs
2 Other MSAs
3 Non-MSAs

Appendix Table 2, Continued: Question Texts and Response Categories

Number of Parents in Home

Number of Parents in the Home was re-coded from the following variable.

If father or mother was checked, 1 (one parent in the home) was coded; if father and mother were both checked, 2 (two parents in the home) was coded. All other valid responses were coded as 0 (no parents in the home).

Which of the following people live in the same household with you? (Mark ALL that apply.)

A.	Father (or stepfather)
B.	Mother (or stepmother)
C.	Brothers (or stepbrothers)
D.	Sisters (or stepsisters)
E.	Grandparent(s)
F.	Other relative(s)
G.	Nonrelative(s)
H.	I live alone

Truancy

During the LAST FOUR WEEKS, how many whole days of school have you missed because you skipped or "cut"?

1	None
2	1 day
3	2 days
4	3 days
5	4 or more

Evenings out for fun and recreation

During a typical week, on how many evenings do you go out for fun and recreation?

1	Less than one evening per week
2	One evening
3	Two evenings
4	Three evenings
5	Four or five evenings
6	Six or seven evenings per week

Mother's work status

The item on mother's work was recoded. If 1 was checked then mother's work status was coded 0. If any other valid response was checked then mother's work status was coded 1.

Did your mother have a paid job (half-time or more) during the time you were growing up?

1	No
2	Yes, some of the time when I was growing up
3	Yes, most of the time
4	Yes, all or nearly all of the time

Appendix Table 2, Continued: Question Texts and Response Categories

Self Esteem index

Four of the eight items (indicated below) were reverse coded prior to the construction of the index. The index is simply a mean index allowing for missing data. A second version of the index was constructed by collapsing the scales so that response categories 1 and 2 were coded as 1, response category 3 was coded as 3, and response categories 3 and 4 were coded as 3. Then an mean index was constructed.

(8 statements sharing a common lead question and response categories)

How much do you agree or disagree with each of the following statements?

1 I feel I do not have much to be proud of (reverse coded)
2 Sometimes I think that I am no good at all (reverse coded)
3 I feel that I can't do anything right (reverse coded)
4 I feel that my life is not very useful (reverse coded)
5 I take a positive attitude toward myself
6 I feel I am a person of worth, on an equal plane with others
7 I am able to do things as well as most people
8 On the whole, I'm satisfied with myself

1 Disagree
2 Mostly disagree
3 Neither
4 Mostly agree
5 Agree

Locus of Control index

Four of the eight items (indicated below) were reverse coded prior to the construction of the index. The index is simply a mean index allowing for missing data. A second version of the index was constructed by collapsing the scales so that response categories 1 and 2 were coded as 1, response category 3 was coded as 3, and response categories 3 and 4 were coded as 3. Then an mean index was constructed.

(8 statements sharing a common lead question and response categories)

How much do you agree or disagree with each of the following statements?

1 Good luck is more important than hard work for success (reverse coded)
2 Every time I try to get ahead something or somebody stops me (reverse coded)
3 Planning only makes a person unhappy since plans hardly ever work out anyway (reverse coded)
4 People who accept their condition in life are happier than those who try to change things
5 People like me don't have much of a chance to be successful in life (reverse coded)
6 When I make plans, I am almost certain that I can make them work
7 I believe a person is master of his/her own fate
8 Planning ahead makes things turn out better

1 Disagree
2 Mostly disagree
3 Neither
4 Mostly agree
5 Agree

Appendix Table 2, Continued: Question Texts and Response Categories

Loneliness/Social Support index

Three of the six items (indicated below) were reverse coded prior to the construction of the index. The index is simply a mean index allowing for missing data. A second version of the index was constructed by collapsing the scales so that response categories 1 and 2 were coded as 1, response category 3 was coded as 3, and response categories 3 and 4 were coded as 3. Then an mean index was constructed.

(6 statements sharing a common lead question and response categories)

How much do you agree or disagree with each of the following statements?

1 A lot of times I feel lonely (reverse coded)
2 There is always someone I can turn to if I need help
3 I often feel left out of things (reverse coded)
4 There is usually someone I can talk to if I need help
5 I often wish I had more good friends (reverse coded)
6 I usually have a few friends around that I can get together with

1 Disagree
2 Mostly disagree
3 Neither
4 Mostly agree
5 Agree

Materialism index

This is a mean index based on three items with common response categories.

How much do you enjoy shopping for things like clothes, music, videos, sporting goods, and book?

How much do you care about having the latest fashion in your clothes, music, videos, leisure activities, and so on?

How much do you care about whether your family has most of the things your friends and neighbors have?

1 Not At All
2 Not Very Much
3 Pretty Much
4 Very Much

Appendix Table 3: Item responses on saving/spending questions among those who report working for pay during the school year, 1981-2011.

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 to:

Item 1	Savings for your future education
Item 2	Savings or payments for a car or car expenses
Item 3	Other savings for long-range purposes
Item 4	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
Item 5	Helping to pay family living expenses (groceries, housing, etc.)

Respondents who reported paid work

	%
Responded to 0 items	7.64
Responded to any 1 item	0.12
Responded to any 2 items	0.20
Responded to any 3 items	0.50
Responded to any 4 items	1.00
Responded to all 5 items	90.54
	100
Wtd. N	53,614

Appendix Table 4A Part 1: Using earnings for a car. Bivariate and multivariate (OLS) estimates of the relationship between hours of paid work during the school year and outcomes (row entries), contrasting those who do and do not use 41% or more of earnings **for a car**.[a] High school seniors, working for pay during the school year, 1981-2011 by gender and race/ethnicity

	SAVE/SPEND 41% or more for a CAR				**DO NOT SAVE/SPEND 41% or more for a CAR**			
	TOTAL SAMPLE				*TOTAL SAMPLE*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	-0.120	-0.068	-0.077	<.0001	-0.177	-0.083	-0.092	<.0001
College Plans	-0.175	-0.130	-0.087	<.0001	-0.172	-0.101	-0.061	<.0001
30-Day Cigarette Smoking	0.128	0.059	0.047	<.0001	0.157	0.080	0.056	<.0001
Any Daily Cigarette Smoking	0.114	0.049	0.012	0.0001	0.141	0.071	0.016	<.0001
Heavy Drinking -- last 2 weeks	0.079	0.011	0.009	0.4332	0.086	0.030	0.022	0.0015
Any Heavy Drinking -- last 2 weeks	0.073	0.014	0.004	0.2802	0.071	0.025	0.007	0.003
Annual Marijuana Use	0.077	0.031	0.037	0.0144	0.105	0.032	0.036	0.0003
Any Annual Marijuana Use	0.063	0.020	0.006	0.1189	0.101	0.042	0.012	<.0001
Annual Cocaine Use	0.039	-0.010	-0.005	0.6033	0.079	0.026	0.011	0.0079
Any Annual Cocaine Use	0.053	0.018	0.003	0.2274	0.084	0.029	0.004	0.0021
Any Illicit Drugs Use Other than Marijuana	0.069	0.036	0.009	0.0131	0.107	0.061	0.014	<.0001
Evenings out	-0.057	-0.084	-0.067	<.0001	-0.012	-0.049	-0.036	<.0001
Materialism Index	0.013	0.000	-0.008	0.0502	0.055	0.001	0.000	0.9522
Locus of Control Index (collapsed version)	-0.074	-0.022	-0.005	0.0759	-0.118	-0.048	-0.011	<.0001
Self-esteem Index (collapsed version)	-0.029	-0.012	-0.003	0.3251	-0.059	-0.037	-0.009	<.0001
Social Support/Loneliness Index (collapsed version)	-0.040	-0.026	-0.007	0.0359	-0.062	-0.049	-0.013	<.0001
	MALES				*MALES*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	-0.134	-0.081	-0.090	<.0001	-0.175	-0.085	-0.092	<.0001
College Plans	-0.197	-0.159	-0.104	<.0001	-0.206	-0.144	-0.085	<.0001
30-Day Cigarette Smoking	0.144	0.079	0.063	<.0001	0.157	0.066	0.045	<.0001
Any Daily Cigarette Smoking	0.124	0.064	0.015	0.0003	0.133	0.050	0.011	0.0001
Heavy Drinking -- last 2 weeks	0.068	-0.004	-0.003	0.8543	0.091	0.016	0.012	0.2819
Any Heavy Drinking -- last 2 weeks	0.061	-0.004	-0.001	0.8255	0.076	0.017	0.005	0.1985
Annual Marijuana Use	0.059	0.018	0.022	0.2878	0.083	0.005	0.006	0.6787
Any Annual Marijuana Use	0.050	0.007	0.002	0.6671	0.081	0.024	0.007	0.0561
Annual Cocaine Use	0.023	-0.032	-0.015	0.2873	0.067	-0.003	-0.001	0.8399
Any Annual Cocaine Use	0.043	0.010	0.002	0.6253	0.072	0.005	0.000	0.9242
Any Illicit Drugs Use Other than Marijuana	0.037	0.014	0.004	0.4709	0.095	0.034	0.008	0.0162
Evenings out	-0.052	-0.082	-0.063	<.0001	0.011	-0.031	-0.022	0.022
Materialism Index	0.024	0.001	0.000	0.9729	0.055	0.012	0.004	0.3714
Locus of Control Index (collapsed version)	-0.072	-0.019	-0.005	0.2727	-0.098	-0.013	-0.003	0.2949
Self-esteem Index (collapsed version)	-0.022	0.006	0.002	0.7171	-0.062	-0.019	-0.004	0.1564
Social Support/Loneliness Index (collapsed version)	-0.024	-0.006	-0.002	0.7114	-0.047	-0.025	-0.006	0.0633
	FEMALES				*FEMALES*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	-0.101	-0.049	-0.056	0.0129	-0.176	-0.086	-0.094	<.0001
College Plans	-0.146	-0.094	-0.065	<.0001	-0.136	-0.066	-0.040	<.0001
30-Day Cigarette Smoking	0.101	0.025	0.020	0.1901	0.154	0.092	0.065	<.0001
Any Daily Cigarette Smoking	0.100	0.023	0.006	0.223	0.143	0.086	0.020	<.0001
Heavy Drinking -- last 2 weeks	0.100	0.051	0.037	0.006	0.069	0.046	0.029	0.0003
Any Heavy Drinking -- last 2 weeks	0.090	0.046	0.013	0.0129	0.056	0.032	0.008	0.0034
Annual Marijuana Use	0.108	0.059	0.068	0.0017	0.118	0.055	0.057	<.0001
Any Annual Marijuana Use	0.084	0.047	0.014	0.0128	0.112	0.057	0.016	<.0001
Annual Cocaine Use	0.071	0.028	0.013	0.1509	0.089	0.054	0.021	<.0001
Any Annual Cocaine Use	0.077	0.042	0.007	0.0403	0.093	0.054	0.008	<.0001
Any Illicit Drugs Use Other than Marijuana	0.120	0.085	0.023	<.0001	0.109	0.078	0.018	<.0001
Evenings out	-0.070	-0.089	-0.075	<.0001	-0.040	-0.062	-0.046	<.0001
Materialism Index	0.001	-0.068	-0.022	0.0006	0.064	-0.015	-0.005	0.2219
Locus of Control Index (collapsed version)	-0.079	-0.034	-0.008	0.0685	-0.129	-0.075	-0.017	<.0001
Self-esteem Index (collapsed version)	-0.045	-0.037	-0.011	0.0469	-0.061	-0.054	-0.014	<.0001
Social Support/Loneliness Index (collapsed version)	-0.071	-0.067	-0.018	0.0003	-0.078	-0.071	-0.019	<.0001

a Analyses are limited to those who held paid employment during the school year. Bivariate statistics are Pearson correlations. Multivariate estimates are derived from OLS regressions controlling for: hours of paid work during the school year, parents education level (index) and truancy (index), all treated as continuous predictors; and region, number of parents in the home, mother's paid job status, student earnings from a paid job, student income from other sources, gender (excluded when analyses were conducted separately by gender), race/ethnicity (excluded when analyses were conducted separately by race/ethnicity), and year of administration (grouped into five 5-year groups plus two 3-year groups), all treated as categorial predictors. All tests for significance adjusted to account for effects of the complex sample design. * p<.05; ** p<.01; *** p<.001

Appendix Table 4A Part 2: Using earnings for a car. Bivariate and multivariate (OLS) estimates of the relationship between hours of paid work during the school year and outcomes (row entries), contrasting those who do and do not use 41% or more of earnings **for a car**.[a] High school seniors, working for pay during the school year, 1981-2011 by gender and race/ethnicity

	SAVE/SPEND 41% or more for a CAR				**DO NOT SAVE/SPEND 41% or more for a CAR**			
	WHITES				*WHITES*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	-0.139	-0.069	-0.080	<.0001	-0.185	-0.091	-0.101	<.0001
College Plans	-0.203	-0.148	-0.102	<.0001	-0.206	-0.123	-0.075	<.0001
30-Day Cigarette Smoking	0.149	0.063	0.052	0.0001	0.190	0.084	0.063	<.0001
Any Daily Cigarette Smoking	0.130	0.047	0.012	0.0019	0.172	0.077	0.018	<.0001
Heavy Drinking -- last 2 weeks	0.095	0.020	0.017	0.2008	0.113	0.042	0.031	0.0002
Any Heavy Drinking -- last 2 weeks	0.086	0.017	0.005	0.2417	0.097	0.035	0.010	0.0006
Annual Marijuana Use	0.090	0.028	0.035	0.0513	0.122	0.025	0.029	0.016
Any Annual Marijuana Use	0.076	0.017	0.005	0.2394	0.117	0.040	0.011	0.0001
Annual Cocaine Use	0.058	0.005	0.002	0.8	0.091	0.020	0.009	0.0833
Any Annual Cocaine Use	0.070	0.030	0.005	0.076	0.095	0.018	0.003	0.1275
Any Illicit Drugs Use Other than Marijuana	0.096	0.050	0.013	0.0041	0.132	0.061	0.015	<.0001
Evenings out	-0.061	-0.082	-0.065	<.0001	0.005	-0.044	-0.032	<.0001
Materialism Index	0.003	-0.041	-0.013	0.0101	0.037	-0.008	-0.003	0.4375
Locus of Control Index (collapsed version)	-0.105	-0.046	-0.011	0.0015	-0.131	-0.063	-0.014	<.0001
Self-esteem Index (collapsed version)	-0.053	-0.025	-0.007	0.0706	-0.069	-0.044	-0.011	<.0001
Social Support/Loneliness Index (collapsed versior	-0.056	-0.035	-0.009	0.0206	-0.070	-0.061	-0.016	<.0001
	AFRICAN AMERICANS				*AFRICAN AMERICANS*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	-0.001	-0.004	-0.004	0.9252	-0.031	-0.021	-0.022	0.3913
College Plans	0.018	-0.002	-0.001	0.9698	-0.006	0.002	0.001	0.926
30-Day Cigarette Smoking	0.049	0.015	0.007	0.6127	0.039	0.040	0.016	0.1668
Any Daily Cigarette Smoking	0.053	0.018	0.003	0.5544	0.045	0.042	0.006	0.1439
Heavy Drinking -- last 2 weeks	0.020	0.008	0.005	<.0001	-0.022	-0.025	-0.012	0.4097
Any Heavy Drinking -- last 2 weeks	-0.016	-0.039	-0.008	<.0001	-0.015	-0.024	-0.005	0.3672
Annual Marijuana Use	0.027	0.022	0.022	<.0001	0.057	0.054	0.052	0.0463
Any Annual Marijuana Use	-0.001	0.000	0.000	<.0001	0.057	0.062	0.016	0.0087
Annual Cocaine Use	-0.059	-0.030	-0.008	0.5312	0.032	0.035	0.008	0.0622
Any Annual Cocaine Use	-0.050	-0.030	-0.003	0.4703	0.021	0.037	0.003	0.2403
Any Illicit Drugs Use Other than Marijuana	-0.030	-0.006	0.001	0.8973	-0.003	0.032	0.005	0.2777
Evenings out	-0.044	-0.105	-0.086	0.0125	-0.012	-0.014	-0.011	0.5603
Materialism Index	0.078	0.022	0.006	0.619	0.054	0.031	0.009	0.2136
Locus of Control Index (collapsed version)	0.041	0.037	0.009	0.3256	0.007	0.039	0.009	0.1145
Self-esteem Index (collapsed version)	0.112	0.097	0.022	0.0089	0.013	0.015	0.003	0.5338
Social Support/Loneliness Index (collapsed versior	-0.013	-0.017	-0.004	<.0001	0.026	0.025	0.006	0.3155
	HISPANICS				*HISPANICS*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	-0.042	-0.082	-0.088	0.0482	-0.139	-0.047	-0.049	0.1134
College Plans	-0.103	-0.086	-0.053	0.0571	-0.045	-0.018	-0.010	0.5532
30-Day Cigarette Smoking	-0.004	0.023	0.015	0.6221	0.083	0.056	0.028	0.0457
Any Daily Cigarette Smoking	-0.001	0.020	0.004	0.6544	0.066	0.044	0.008	0.1338
Heavy Drinking -- last 2 weeks	-0.023	-0.037	-0.028	0.4898	0.034	-0.029	-0.019	0.3637
Any Heavy Drinking -- last 2 weeks	0.016	0.004	0.001	0.928	0.032	-0.020	-0.005	0.4977
Annual Marijuana Use	0.038	0.064	0.068	0.1643	0.048	0.029	0.030	0.3258
Any Annual Marijuana Use	-0.010	-0.005	-0.001	0.9115	0.033	0.022	0.006	0.4429
Annual Cocaine Use	-0.099	-0.134	-0.072	0.1259	0.077	0.050	0.023	0.1019
Any Annual Cocaine Use	-0.077	-0.079	-0.013	0.1679	0.096	0.080	0.013	0.0055
Any Illicit Drugs Use Other than Marijuana	-0.106	-0.073	-0.017	0.1339	0.053	0.017	0.004	0.578
Evenings out	-0.104	-0.063	-0.047	0.1693	-0.047	-0.116	-0.085	<.0001
Materialism Index	0.033	0.045	0.014	0.3545	0.061	-0.009	-0.002	0.8015
Locus of Control Index (collapsed version)	0.041	0.063	0.016	0.0857	-0.071	-0.057	-0.013	0.0374
Self-esteem Index (collapsed version)	0.069	0.076	0.018	0.073	-0.015	-0.033	-0.008	0.244
Social Support/Loneliness Index (collapsed versior	0.041	0.058	0.014	0.1646	-0.018	-0.023	-0.006	0.4153
	ASIAN AMERICANS				*ASIAN AMERICANS*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	-0.105	-0.057	-0.058	0.5723	-0.211	-0.141	-0.163	0.0018
College Plans	0.024	-0.112	-0.055	0.2378	-0.174	-0.143	-0.062	0.0028
30-Day Cigarette Smoking	0.381	0.215	0.133	0.0094	0.093	0.025	0.013	0.521
Any Daily Cigarette Smoking	0.401	0.244	0.056	0.0028	0.069	0.005	0.001	0.9148
Heavy Drinking -- last 2 weeks	0.221	0.056	0.039	0.5899	0.095	0.051	0.026	0.319
Any Heavy Drinking -- last 2 weeks	0.207	0.098	0.025	0.3661	0.096	0.066	0.015	0.1722
Annual Marijuana Use	0.182	0.031	0.028	0.7643	0.096	0.031	0.028	0.4373
Any Annual Marijuana Use	0.254	0.095	0.024	0.359	0.123	0.063	0.016	0.1206
Annual Cocaine Use	0.002	0.023	0.009	0.8166	0.035	-0.015	-0.006	0.7507
Any Annual Cocaine Use	0.016	-0.026	-0.004	0.8055	0.045	-0.019	-0.002	0.6534
Any Illicit Drugs Use Other than Marijuana	0.033	-0.020	-0.004	0.828	0.113	0.060	0.012	0.195
Evenings out	0.230	0.124	0.089	0.1655	0.042	-0.041	-0.033	0.3112
Materialism Index	0.093	0.051	0.015	0.621	0.117	0.097	0.032	0.0288
Locus of Control Index (collapsed version)	-0.077	-0.059	-0.013	0.4816	-0.103	-0.067	-0.015	0.1319
Self-esteem Index (collapsed version)	0.055	-0.128	-0.034	0.1533	-0.049	-0.023	-0.006	0.5831
Social Support/Loneliness Index (collapsed versior	0.063	-0.129	-0.034	0.1712	-0.053	-0.021	-0.006	0.6195

a Analyses are limited to those who held paid employment during the school year. Bivariate statistics are Pearson correlations. Multivariate estimates are derived from OLS regressions controlling for: hours of paid work during the school year, parent education level (index) and truancy (index), all treated as continuous predictors; and region, number of parents in the home, mother's paid job status, student earnings from a paid job, student income from other sources, gender (excluded when analyses were conducted separately by gender), race/ethnicity (excluded when analyses were conducted separately by race/ethnicity), and year of administration (grouped into five 5-year groups plus two 3-year groups), all treated as categorial predictors. All tests for significance adjusted to account for effects of the complex sample design. * p<.05; ** p<.01; *** p<.001

Appendix Table 4B Part 1: Saving for other long-range purposes. Bivariate and multivariate (OLS) estimates of the relationship between hours of paid work during the school year and outcomes (row entries), contrasting those who do and do not save 41% or more of earnings **for other long-range purposes**.[a] High school seniors, working for pay during the school year, 1981-2011 by gender and race/ethnicity

	SAVE 41% or more for OTHER LONG TERM PURPOSES				**DO NOT SAVE 41% or more for OTHER LONG TERM PURPOSES**			
	TOTAL SAMPLE				*TOTAL SAMPLE*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	-0.193	-0.093	-0.098	<.0001	-0.162	-0.078	-0.086	<.0001
College Plans	-0.203	-0.134	-0.082	<.0001	-0.185	-0.117	-0.072	<.0001
30-Day Cigarette Smoking	0.138	0.054	0.036	0.0018	0.158	0.080	0.058	<.0001
Any Daily Cigarette Smoking	0.124	0.043	0.009	0.012	0.141	0.071	0.016	<.0001
Heavy Drinking -- last 2 weeks	0.099	0.040	0.029	0.025	0.091	0.020	0.015	0.0176
Any Heavy Drinking -- last 2 weeks	0.079	0.036	0.009	0.0249	0.080	0.021	0.006	0.0087
Annual Marijuana Use	0.080	0.020	0.021	0.246	0.103	0.033	0.038	<.0001
Any Annual Marijuana Use	0.083	0.039	0.010	0.016	0.095	0.035	0.010	<.0001
Annual Cocaine Use	0.034	-0.026	-0.010	0.2621	0.076	0.023	0.010	0.0225
Any Annual Cocaine Use	0.054	0.006	0.001	0.8149	0.081	0.031	0.005	0.0007
Any Illicit Drugs Use Other than Marijuana	0.073	0.026	0.006	0.1462	0.106	0.065	0.016	<.0001
Evenings out	-0.002	-0.038	-0.028	0.027	-0.022	-0.063	-0.047	<.0001
Materialism Index	0.067	0.000	0.004	0.4416	0.037	-0.008	-0.003	0.3249
Locus of Control Index (collapsed version)	-0.136	-0.053	-0.013	0.0009	-0.113	-0.043	-0.010	<.0001
Self-esteem Index (collapsed version)	-0.056	-0.035	-0.008	0.0296	-0.052	-0.030	-0.007	0.0002
Social Support/Loneliness Index (collapsed version)	-0.060	-0.044	-0.011	0.0087	-0.057	-0.045	-0.011	<.0001
	MALES				*MALES*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	-0.202	-0.113	-0.118	<.0001	-0.156	-0.078	-0.085	<.0001
College Plans	-0.210	-0.155	-0.091	<.0001	-0.219	-0.162	-0.099	<.0001
30-Day Cigarette Smoking	0.155	0.069	0.046	0.0079	0.157	0.073	0.054	<.0001
Any Daily Cigarette Smoking	0.134	0.057	0.011	0.0248	0.134	0.057	0.013	<.0001
Heavy Drinking -- last 2 weeks	0.096	0.029	0.023	0.2681	0.088	0.005	0.004	0.6972
Any Heavy Drinking -- last 2 weeks	0.069	0.015	0.004	0.5248	0.079	0.011	0.003	0.3447
Annual Marijuana Use	0.060	0.014	0.016	0.5568	0.076	0.007	0.008	0.5536
Any Annual Marijuana Use	0.078	0.046	0.012	0.0552	0.069	0.012	0.003	0.2895
Annual Cocaine Use	0.012	-0.058	-0.024	0.1463	0.060	-0.004	-0.002	0.8061
Any Annual Cocaine Use	0.040	-0.021	-0.003	0.4285	0.065	0.005	0.001	0.4909
Any Illicit Drugs Use Other than Marijuana	0.039	-0.010	-0.002	0.6965	0.085	0.041	0.010	0.0018
Evenings out	0.030	-0.010	-0.007	0.6927	-0.018	-0.059	-0.043	<.0001
Materialism Index	0.107	0.075	0.024	0.0031	0.035	0.001	0.000	0.9678
Locus of Control Index (collapsed version)	-0.138	-0.053	-0.012	0.0169	-0.092	-0.013	-0.003	0.2638
Self-esteem Index (collapsed version)	-0.044	0.008	0.002	0.7467	-0.054	-0.016	-0.004	0.1681
Social Support/Loneliness Index (collapsed version)	-0.045	-0.017	-0.004	0.5093	-0.041	-0.021	-0.005	0.0695
	FEMALES				*FEMALES*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	-0.182	-0.077	-0.080	0.0011	-0.158	-0.079	-0.087	<.0001
College Plans	-0.191	-0.113	-0.072	<.0001	-0.142	-0.074	-0.045	<.0001
30-Day Cigarette Smoking	0.110	0.030	0.020	0.179	0.156	0.084	0.061	<.0001
Any Daily Cigarette Smoking	0.106	0.021	0.005	0.3552	0.146	0.081	0.019	<.0001
Heavy Drinking -- last 2 weeks	0.087	0.061	0.038	0.0113	0.077	0.042	0.027	0.0003
Any Heavy Drinking -- last 2 weeks	0.071	0.062	0.016	0.008	0.067	0.030	0.008	0.0042
Annual Marijuana Use	0.106	0.041	0.041	0.0783	0.120	0.060	0.063	<.0001
Any Annual Marijuana Use	0.087	0.042	0.011	0.0717	0.113	0.058	0.016	<.0001
Annual Cocaine Use	0.072	0.036	0.013	0.2088	0.090	0.050	0.021	<.0001
Any Annual Cocaine Use	0.080	0.054	0.007	0.0278	0.094	0.053	0.008	<.0001
Any Illicit Drugs Use Other than Marijuana	0.112	0.072	0.016	0.004	0.120	0.085	0.021	<.0001
Evenings out	-0.048	-0.062	-0.047	0.0144	-0.037	-0.065	-0.049	<.0001
Materialism Index	0.037	-0.055	-0.017	0.0252	0.051	-0.022	-0.007	0.0638
Locus of Control Index (collapsed version)	-0.123	-0.042	-0.010	0.0686	-0.128	-0.074	-0.017	<.0001
Self-esteem Index (collapsed version)	-0.062	-0.056	-0.014	0.0126	-0.060	-0.047	-0.013	<.0001
Social Support/Loneliness Index (collapsed version)	-0.072	-0.057	-0.014	0.0161	-0.080	-0.074	-0.020	<.0001

a Analyses are limited to those who held paid employment during the school year. Bivariate statistics are Pearson correlations. Multivariate estimates are derived from OLS regressions controlling for: hours of paid work during the school year, parent education level (index) and truancy (index), all treated as continuous predictors; and region, number of parents in the home, mother's paid job status, student earnings from a paid job, student income from other sources, gender (excluded when analyses were conducted separately by gender), race/ethnicity (excluded when analyses were conducted separately by race/ethnicity), and year of administration (grouped into five 5-year groups plus two 3-year groups), all treated as categorial predictors. All tests for significance adjusted to account for effects of the complex sample design. * p<.05; ** p<.01; *** p<.001

Appendix Table 4B Part 2: Saving for other long-range purposes. Bivariate and multivariate (OLS) estimates of the relationship between hours of paid work during the school year and outcomes (row entries), contrasting those who do and do not save 41% or more of earnings **for other long-range purposes**.[a] High school seniors, working for pay during the school year, 1981-2011 by gender and race/ethnicity

	SAVE 41% or more for OTHER LONG TERM PURPOSES				DO NOT SAVE 41% or more for OTHER LONG TERM PURPOSES			
	WHITES				*WHITES*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	-0.228	-0.115	-0.123	<.0001	-0.172	-0.080	-0.089	<.0001
College Plans	-0.265	-0.168	-0.107	<.0001	-0.214	-0.136	-0.085	<.0001
30-Day Cigarette Smoking	0.180	0.054	0.038	0.0127	0.183	0.085	0.065	<.0001
Any Daily Cigarette Smoking	0.160	0.033	0.007	0.1199	0.164	0.078	0.019	<.0001
Heavy Drinking -- last 2 weeks	0.144	0.049	0.037	0.027	0.108	0.030	0.023	0.0018
Any Heavy Drinking -- last 2 weeks	0.122	0.042	0.011	0.0397	0.096	0.029	0.008	0.0019
Annual Marijuana Use	0.112	0.012	0.013	0.5761	0.114	0.028	0.032	0.0029
Any Annual Marijuana Use	0.113	0.032	0.009	0.1001	0.107	0.033	0.009	0.0004
Annual Cocaine Use	0.070	-0.019	-0.008	0.4811	0.084	0.023	0.010	0.0329
Any Annual Cocaine Use	0.081	0.003	0.000	0.9925	0.090	0.027	0.004	0.0141
Any Illicit Drugs Use Other than Marijuana	0.115	0.030	0.007	0.1584	0.126	0.069	0.017	<.0001
Evenings out	0.007	-0.027	-0.020	0.1914	-0.013	-0.060	-0.044	<.0001
Materialism Index	0.042	0.004	0.001	0.841	0.026	-0.017	-0.005	0.0929
Locus of Control Index (collapsed version)	-0.175	-0.076	-0.018	0.0001	-0.129	-0.060	-0.013	<.0001
Self-esteem Index (collapsed version)	-0.082	-0.032	-0.007	0.1181	-0.064	-0.041	-0.010	<.0001
Social Support/Loneliness Index (collapsed version)	-0.084	-0.058	-0.014	0.0073	-0.066	-0.054	-0.014	<.0001
	AFRICAN AMERICANS				*AFRICAN AMERICANS*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	0.019	0.021	0.021	0.5629	-0.038	-0.025	-0.026	0.2921
College Plans	0.074	0.070	0.039	0.1166	-0.027	-0.016	-0.009	0.5235
30-Day Cigarette Smoking	-0.009	-0.018	-0.008	0.5904	0.065	0.047	0.020	0.0817
Any Daily Cigarette Smoking	-0.032	-0.024	-0.003	0.5235	0.073	0.054	0.008	0.051
Heavy Drinking -- last 2 weeks	-0.048	-0.015	-0.008	0.7356	0.009	-0.012	-0.006	0.6751
Any Heavy Drinking -- last 2 weeks	-0.026	-0.001	0.000	0.978	-0.002	-0.033	-0.007	0.2229
Annual Marijuana Use	-0.005	0.040	0.036	0.3934	0.066	0.051	0.051	0.0579
Any Annual Marijuana Use	0.000	0.032	0.007	0.4975	0.055	0.051	0.014	0.0336
Annual Cocaine Use	-0.062	-0.039	-0.007	0.349	0.025	0.037	0.009	0.0559
Any Annual Cocaine Use	-0.053	-0.034	-0.002	0.4248	0.016	0.036	0.003	0.2188
Any Illicit Drugs Use Other than Marijuana	-0.035	-0.007	-0.001	0.8959	0.003	0.029	0.005	0.2988
Evenings out	-0.003	-0.068	-0.053	0.1274	-0.020	-0.032	-0.025	0.2049
Materialism Index	0.098	0.016	0.004	0.6996	0.050	0.032	0.009	0.2056
Locus of Control Index (collapsed version)	0.051	0.060	0.014	0.1417	-0.009	0.029	0.007	0.2227
Self-esteem Index (collapsed version)	0.045	0.023	0.005	0.5837	0.025	0.031	0.007	0.2113
Social Support/Loneliness Index (collapsed version)	0.004	-0.022	-0.005	0.5649	0.014	0.016	0.004	0.5007
	HISPANICS				*HISPANICS*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	-0.140	-0.134	-0.137	0.0044	-0.105	-0.037	-0.039	0.1702
College Plans	-0.126	-0.151	-0.088	0.0038	-0.058	0.000	0.000	0.9794
30-Day Cigarette Smoking	0.039	0.071	0.042	0.2021	0.068	0.039	0.021	0.178
Any Daily Cigarette Smoking	0.055	0.105	0.019	0.0771	0.047	0.018	0.003	0.5645
Heavy Drinking -- last 2 weeks	-0.032	0.051	0.036	0.3918	0.038	-0.049	-0.033	0.1419
Any Heavy Drinking -- last 2 weeks	-0.066	0.020	0.005	0.7167	0.055	-0.010	-0.002	0.7315
Annual Marijuana Use	-0.027	0.061	0.062	0.274	0.064	0.046	0.047	0.0945
Any Annual Marijuana Use	-0.038	0.072	0.018	0.1929	0.033	0.011	0.003	0.6791
Annual Cocaine Use	-0.107	-0.043	-0.022	0.5934	0.058	-0.003	-0.002	0.9472
Any Annual Cocaine Use	-0.055	0.033	0.005	0.6128	0.071	0.037	0.006	0.2582
Any Illicit Drugs Use Other than Marijuana	-0.098	0.004	0.001	0.9478	0.035	0.003	0.001	0.9148
Evenings out	-0.072	-0.073	-0.053	0.1963	-0.053	-0.107	-0.079	<.0001
Materialism Index	0.084	0.076	0.022	0.1877	0.050	-0.002	-0.001	0.9477
Locus of Control Index (collapsed version)	-0.032	-0.046	-0.011	0.3289	-0.051	-0.021	-0.005	0.4496
Self-esteem Index (collapsed version)	0.061	0.013	0.003	0.8099	-0.003	0.007	0.002	0.8104
Social Support/Loneliness Index (collapsed version)	0.037	0.048	0.011	0.3352	-0.009	-0.006	-0.001	0.826
	ASIAN AMERICANS				*ASIAN AMERICANS*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	-0.341	-0.308	-0.304	0.0001	-0.165	-0.104	-0.119	0.0233
College Plans	-0.084	-0.273	-0.118	0.006	-0.152	-0.120	-0.053	0.0122
30-Day Cigarette Smoking	0.233	0.054	0.028	0.5509	0.168	0.098	0.052	0.0235
Any Daily Cigarette Smoking	0.214	0.048	0.010	0.6254	0.160	0.090	0.017	0.0432
Heavy Drinking -- last 2 weeks	0.060	0.152	0.095	0.0662	0.178	0.109	0.058	0.0199
Any Heavy Drinking -- last 2 weeks	0.075	0.206	0.048	0.015	0.160	0.097	0.022	0.0318
Annual Marijuana Use	0.088	0.077	0.064	0.2598	0.127	0.043	0.039	0.3391
Any Annual Marijuana Use	0.170	0.227	0.052	0.0071	0.157	0.070	0.018	0.0845
Annual Cocaine Use	0.097	0.082	0.016	0.2437	0.027	-0.017	-0.007	0.7231
Any Annual Cocaine Use	0.108	0.100	0.012	0.1983	0.034	-0.018	-0.002	0.7096
Any Illicit Drugs Use Other than Marijuana	0.052	0.009	0.002	<.0001	0.112	0.069	0.014	0.1007
Evenings out	0.103	0.181	0.145	0.085	0.078	-0.024	-0.018	0.5727
Materialism Index	0.062	-0.018	-0.005	0.8578	0.121	0.111	0.036	0.0176
Locus of Control Index (collapsed version)	-0.079	-0.005	-0.001	0.9563	-0.113	-0.113	-0.025	0.0119
Self-esteem Index (collapsed version)	0.032	0.149	0.038	0.1287	-0.042	-0.053	-0.015	0.2216
Social Support/Loneliness Index (collapsed version)	-0.077	0.042	0.011	0.6693	-0.019	-0.007	-0.002	0.8785

a Analyses are limited to those who held paid employment during the school year. Bivariate statistics are Pearson correlations. Multivariate estimates are derived from OLS regressions controlling for: hours of paid work during the school year, parent education level (index) and truancy (index), all treated as continuous predictors; and region, number of parents in the home, mother's paid job status, student earnings from a paid job, student income from other sources, gender (excluded when analyses were conducted separately by gender), race/ethnicity (excluded when analyses were conducted separately by race/ethnicity), and year of administration (grouped into five 5-year groups plus two 3-year groups), all treated as categorial predictors. All tests for significance adjusted to account for effects of the complex sample design. * p<.05; ** p<.01; *** p<.001

Appendix Table 4C Part 1: Using earnings for own needs. Bivariate and multivariate (OLS) estimates of the relationship between hours of paid work during the school year and outcomes (row entries), contrasting those who do and do not spend 41% or more of earnings **for their own needs**.[a] High school seniors, working for pay during the school year, 1981-2011 by gender and race/ethnicity

	SPENDING 41% or more for SELF				**DO NOT SPEND 41% or more for SELF**			
	TOTAL SAMPLE				*TOTAL SAMPLE*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	-0.162	-0.081	-0.090	<.0001	-0.185	-0.089	-0.097	<.0001
College Plans	-0.177	-0.117	-0.073	<.0001	-0.204	-0.125	-0.076	<.0001
30-Day Cigarette Smoking	0.141	0.073	0.054	<.0001	0.180	0.083	0.056	<.0001
Any Daily Cigarette Smoking	0.125	0.064	0.015	<.0001	0.162	0.071	0.015	<.0001
Heavy Drinking -- last 2 weeks	0.079	0.025	0.019	0.0157	0.119	0.031	0.021	0.0099
Any Heavy Drinking -- last 2 weeks	0.064	0.021	0.006	0.0224	0.110	0.033	0.009	0.0019
Annual Marijuana Use	0.089	0.027	0.032	0.0044	0.124	0.048	0.050	<.0001
Any Annual Marijuana Use	0.082	0.038	0.011	<.0001	0.116	0.044	0.012	0.0001
Annual Cocaine Use	0.058	-0.002	-0.001	0.8105	0.087	0.042	0.016	0.0004
Any Annual Cocaine Use	0.063	0.008	0.001	0.4697	0.098	0.057	0.008	<.0001
Any Illicit Drugs Use Other than Marijuana	0.085	0.047	0.012	<.0001	0.125	0.075	0.017	<.0001
Evenings out	-0.007	-0.037	-0.027	0.0003	-0.024	-0.082	-0.060	<.0001
Materialism Index	0.055	0.000	0.003	0.2434	0.041	-0.013	-0.004	0.2554
Locus of Control Index (collapsed version)	-0.107	-0.034	-0.008	0.0002	-0.138	-0.062	-0.014	<.0001
Self-esteem Index (collapsed version)	-0.034	-0.017	-0.004	0.0847	-0.080	-0.047	-0.011	<.0001
Social Support/Loneliness Index (collapsed version)	-0.047	-0.032	-0.008	0.0008	-0.071	-0.058	-0.015	<.0001
	MALES				*MALES*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	-0.146	-0.085	-0.093	<.0001	-0.199	-0.095	-0.101	<.0001
College Plans	-0.209	-0.161	-0.099	<.0001	-0.226	-0.164	-0.098	<.0001
30-Day Cigarette Smoking	0.144	0.063	0.048	<.0001	0.180	0.086	0.058	<.0001
Any Daily Cigarette Smoking	0.123	0.050	0.011	0.0004	0.155	0.069	0.014	<.0001
Heavy Drinking -- last 2 weeks	0.074	0.011	0.009	0.4873	0.114	0.009	0.007	0.5767
Any Heavy Drinking -- last 2 weeks	0.060	0.009	0.003	0.5328	0.104	0.016	0.004	0.3151
Annual Marijuana Use	0.061	0.003	0.004	0.8081	0.100	0.029	0.031	0.075
Any Annual Marijuana Use	0.057	0.019	0.005	0.1532	0.095	0.025	0.007	0.1056
Annual Cocaine Use	0.033	-0.044	-0.021	0.0413	0.079	0.038	0.015	0.0176
Any Annual Cocaine Use	0.043	-0.020	-0.003	0.199	0.086	0.005	0.006	0.0084
Any Illicit Drugs Use Other than Marijuana	0.063	0.016	0.004	0.2995	0.097	0.059	0.013	0.0007
Evenings out	0.016	-0.007	-0.005	0.6426	-0.031	-0.102	-0.072	<.0001
Materialism Index	0.060	0.029	0.009	0.04	0.043	0.000	0.000	0.974
Locus of Control Index (collapsed version)	-0.089	0.001	0.000	0.9236	-0.122	-0.050	-0.011	0.002
Self-esteem Index (collapsed version)	-0.041	0.004	0.001	0.8101	-0.068	-0.029	-0.006	0.0695
Social Support/Loneliness Index (collapsed version)	-0.027	0.001	0.000	0.9413	-0.056	-0.042	-0.010	0.0078
	FEMALES				*FEMALES*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	-0.167	-0.081	-0.089	<.0001	-0.165	-0.087	-0.093	<.0001
College Plans	-0.138	-0.079	-0.049	<.0001	-0.172	-0.085	-0.052	<.0001
30-Day Cigarette Smoking	0.135	0.078	0.058	<.0001	0.176	0.080	0.054	<.0001
Any Daily Cigarette Smoking	0.125	0.075	0.018	<.0001	0.166	0.072	0.016	<.0001
Heavy Drinking -- last 2 weeks	0.069	0.042	0.029	0.0022	0.112	0.070	0.040	<.0001
Any Heavy Drinking -- last 2 weeks	0.055	0.032	0.009	0.0087	0.100	0.058	0.014	0.0002
Annual Marijuana Use	0.107	0.054	0.059	<.0001	0.145	0.071	0.070	<.0001
Any Annual Marijuana Use	0.099	0.058	0.017	<.0001	0.133	0.067	0.018	<.0001
Annual Cocaine Use	0.081	0.042	0.018	0.0016	0.097	0.056	0.020	0.0039
Any Annual Cocaine Use	0.080	0.036	0.005	0.004	0.113	0.081	0.011	0.0001
Any Illicit Drugs Use Other than Marijuana	0.101	0.076	0.019	<.0001	0.149	0.099	0.022	<.0001
Evenings out	-0.038	-0.061	-0.047	<.0001	-0.032	-0.057	-0.043	0.0006
Materialism Index	0.066	-0.007	-0.002	0.6095	0.042	-0.037	-0.011	0.0304
Locus of Control Index (collapsed version)	-0.115	-0.066	-0.015	<.0001	-0.151	-0.076	-0.017	<.0001
Self-esteem Index (collapsed version)	-0.036	-0.034	-0.009	0.0113	-0.097	-0.069	-0.018	<.0001
Social Support/Loneliness Index (collapsed version)	-0.069	-0.063	-0.017	<.0001	-0.092	-0.082	-0.021	<.0001

a Analyses are limited to those who held paid employment during the school year. Bivariate statistics are Pearson correlations. Multivariate estimates are derived from OLS regressions controlling for: hours of paid work during the school year, parent education level (index) and truancy (index), all treated as continuous predictors; and region, number of parents in the home, mother's paid job status, student earnings from a paid job, student income from other sources, gender (excluded when analyses were conducted separately by gender), race/ethnicity (excluded when analyses were conducted separately by race/ethnicity), and year of administration (grouped into five 5-year groups plus two 3-year groups), all treated as categorial predictors. All tests for significance adjusted to account for effects of the complex sample design. * p<.05; ** p<.01; *** p<.001

Appendix Table 4C Part 2: Using earnings for own needs. Bivariate and multivariate (OLS) estimates of the relationship between hours of paid work during the school year and outcomes (row entries), contrasting those who do and do not spend 41% or more of earnings **for their own needs**.[a] High school seniors, working for pay during the school year, 1981-2011 by gender and race/ethnicity

	SPENDING 41% or more for SELF				DO NOT SPEND 41% or more for SELF			
	WHITES				*WHITES*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	-0.174	-0.082	-0.091	<.0001	-0.205	-0.107	-0.115	<.0001
College Plans	-0.216	-0.133	-0.085	<.0001	-0.234	-0.157	-0.096	<.0001
30-Day Cigarette Smoking	0.175	0.082	0.065	<.0001	0.203	0.083	0.059	<.0001
Any Daily Cigarette Smoking	0.156	0.072	0.018	<.0001	0.183	0.071	0.016	<.0001
Heavy Drinking -- last 2 weeks	0.105	0.037	0.030	0.0032	0.140	0.042	0.030	0.0012
Any Heavy Drinking -- last 2 weeks	0.088	0.030	0.008	0.009	0.128	0.041	0.011	0.0008
Annual Marijuana Use	0.105	0.019	0.023	0.0981	0.139	0.049	0.051	0.0003
Any Annual Marijuana Use	0.099	0.036	0.010	0.001	0.131	0.041	0.011	0.0018
Annual Cocaine Use	0.079	0.011	0.005	0.4808	0.092	0.031	0.012	0.0289
Any Annual Cocaine Use	0.082	0.010	0.002	0.4115	0.102	0.045	0.006	0.0038
Any Illicit Drugs Use Other than Marijuana	0.114	0.051	0.013	<.0001	0.147	0.081	0.019	<.0001
Evenings out	0.006	-0.032	-0.023	0.0116	-0.016	-0.076	-0.055	<.0001
Materialism Index	0.043	0.015	0.005	0.1905	0.028	-0.037	-0.011	0.0104
Locus of Control Index (collapsed version)	-0.124	-0.052	-0.012	<.0001	-0.161	-0.082	-0.018	<.0001
Self-esteem Index (collapsed version)	-0.046	-0.019	-0.005	0.0969	-0.096	-0.063	-0.015	<.0001
Social Support/Loneliness Index (collapsed version)	-0.056	-0.040	-0.010	0.0006	-0.084	-0.072	-0.018	<.0001
	AFRICAN AMERICANS				*AFRICAN AMERICANS*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	-0.040	-0.030	-0.031	0.2399	0.005	0.016	0.017	0.6665
College Plans	0.008	0.006	0.004	0.791	-0.030	0.003	0.002	0.9488
30-Day Cigarette Smoking	0.051	0.049	0.020	0.0265	0.042	0.016	0.007	0.6782
Any Daily Cigarette Smoking	0.055	0.051	0.007	0.0267	0.040	0.015	0.002	0.7149
Heavy Drinking -- last 2 weeks	0.003	0.005	0.003	0.8446	-0.026	-0.068	-0.031	<.0001
Any Heavy Drinking -- last 2 weeks	-0.007	-0.014	-0.003	0.5757	-0.020	-0.052	-0.010	<.0001
Annual Marijuana Use	0.057	0.070	0.069	0.0104	0.037	0.005	0.005	0.9015
Any Annual Marijuana Use	0.047	0.066	0.017	0.0108	0.035	0.019	0.005	0.628
Annual Cocaine Use	-0.009	0.000	0.000	0.9969	0.042	0.054	0.011	0.1808
Any Annual Cocaine Use	-0.034	-0.021	-0.002	0.3066	0.065	0.085	0.007	0.0951
Any Illicit Drugs Use Other than Marijuana	-0.010	0.032	0.005	0.2735	0.005	0.006	0.001	0.8985
Evenings out	0.018	-0.009	-0.007	0.7369	-0.075	-0.084	-0.064	0.0185
Materialism Index	0.059	0.015	0.004	0.5743	0.066	0.075	0.021	0.041
Locus of Control Index (collapsed version)	-0.002	0.024	0.006	0.3764	0.013	0.039	0.009	0.2727
Self-esteem Index (collapsed version)	0.023	0.019	0.004	0.4974	0.035	0.028	0.006	0.4449
Social Support/Loneliness Index (collapsed version)	0.012	-0.003	-0.001	0.9041	0.014	0.012	0.003	0.7242
	HISPANICS				*HISPANICS*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	-0.118	-0.056	-0.059	0.0722	-0.113	-0.064	-0.066	0.1021
College Plans	-0.075	-0.064	-0.037	0.0609	-0.057	0.021	0.012	0.5576
30-Day Cigarette Smoking	0.054	0.010	0.006	0.7284	0.072	0.072	0.037	0.0838
Any Daily Cigarette Smoking	0.038	0.005	0.001	0.8482	0.067	0.074	0.013	0.0847
Heavy Drinking -- last 2 weeks	0.017	-0.041	-0.028	0.2795	0.030	-0.040	-0.027	0.3585
Any Heavy Drinking -- last 2 weeks	0.021	-0.018	-0.005	0.5924	0.048	-0.008	-0.002	0.8439
Annual Marijuana Use	0.061	0.040	0.041	0.1864	0.025	0.051	0.051	0.2514
Any Annual Marijuana Use	0.031	0.004	0.001	0.8985	0.006	0.037	0.010	0.3827
Annual Cocaine Use	-0.020	-0.083	-0.040	0.1786	0.081	0.061	0.030	0.1252
Any Annual Cocaine Use	0.021	-0.015	-0.002	0.7058	0.085	0.086	0.013	0.0229
Any Illicit Drugs Use Other than Marijuana	-0.013	-0.060	-0.014	0.0841	0.035	0.063	0.013	0.1244
Evenings out	-0.053	-0.096	-0.071	0.0016	-0.070	-0.121	-0.087	0.0009
Materialism Index	0.053	0.013	0.004	0.7357	0.066	0.028	0.008	0.4703
Locus of Control Index (collapsed version)	-0.040	0.011	0.003	0.7095	-0.051	-0.066	-0.016	0.0809
Self-esteem Index (collapsed version)	0.012	-0.007	-0.002	0.8118	0.008	0.045	0.010	0.2367
Social Support/Loneliness Index (collapsed version)	0.000	0.002	0.000	0.9657	0.002	0.007	0.002	0.8529
	ASIAN AMERICANS				*ASIAN AMERICANS*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	-0.143	-0.130	-0.148	0.0171	-0.258	-0.097	-0.104	0.0795
College Plans	-0.105	-0.083	-0.037	0.1396	-0.191	-0.202	-0.091	0.0035
30-Day Cigarette Smoking	0.174	0.119	0.065	0.0093	0.181	0.067	0.034	0.2947
Any Daily Cigarette Smoking	0.168	0.124	0.025	0.0157	0.165	0.055	0.010	0.3712
Heavy Drinking -- last 2 weeks	0.154	0.111	0.062	0.0322	0.139	0.076	0.042	0.2643
Any Heavy Drinking -- last 2 weeks	0.158	0.128	0.031	0.0158	0.102	0.038	0.007	0.5821
Annual Marijuana Use	0.103	0.022	0.021	0.6437	0.143	0.053	0.041	0.4009
Any Annual Marijuana Use	0.151	0.074	0.020	0.1105	0.167	0.109	0.024	0.0595
Annual Cocaine Use	-0.004	-0.052	-0.024	0.2999	0.108	0.109	0.036	0.0744
Any Annual Cocaine Use	0.000	-0.047	-0.006	0.3659	0.117	0.053	0.007	0.4296
Any Illicit Drugs Use Other than Marijuana	0.109	0.067	0.014	0.1832	0.091	0.115	0.023	0.0963
Evenings out	0.072	-0.014	-0.011	0.7724	0.057	0.000	0.000	0.9985
Materialism Index	0.048	0.062	0.019	0.2494	0.163	0.101	0.034	0.122
Locus of Control Index (collapsed version)	-0.081	-0.109	-0.025	0.0504	-0.142	-0.069	-0.015	0.2129
Self-esteem Index (collapsed version)	-0.028	-0.038	-0.011	0.4671	-0.041	-0.063	-0.017	0.2811
Social Support/Loneliness Index (collapsed version)	-0.021	0.005	0.001	0.9277	-0.047	-0.047	-0.012	0.4303

a Analyses are limited to those who held paid employment during the school year. Bivariate statistics are Pearson correlations. Multivariate estimates are derived from OLS regressions controlling for: hours of paid work during the school year, parent education level (index) and truancy (index), all treated as continuous predictors; and region, number of parents in the home, mother's paid job status, student earnings from a paid job, student income from other sources, gender (excluded when analyses were conducted separately by gender), race/ethnicity (excluded when analyses were conducted separately by race/ethnicity), and year of administration (grouped into five 5-year groups plus two 3-year groups), all treated as categorial predictors. All tests for significance adjusted to account for effects of the complex sample design. * p<.05; ** p<.01; *** p<.001

Appendix Table 4D Part 1: Spending earnings for family needs. Bivariate and multivariate (OLS) estimates of the relationship between hours of paid work during the school year and outcomes (row entries), contrasting those who do and do not spend 41% or more of earnings **for their family needs**.[a] High school seniors, working for pay during the school year, 1981-2011 by gender and race/ethnicity

	USE 41% or more for FAMILY NEEDS					**DO NOT USE 41% or more for FAMILY NEEDS**			
	TOTAL SAMPLE					*TOTAL SAMPLE*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|		Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	-0.058	-0.039	-0.042	0.058		-0.174	-0.084	-0.093	<.0001
College Plans	-0.053	-0.054	-0.034	0.0039		-0.199	-0.128	-0.078	<.0001
30-Day Cigarette Smoking	0.123	0.068	0.052	0.0004		0.158	0.076	0.054	<.0001
Any Daily Cigarette Smoking	0.110	0.055	0.012	0.0049		0.141	0.067	0.015	<.0001
Heavy Drinking -- last 2 weeks	0.072	0.029	0.022	0.2051		0.097	0.025	0.018	0.0035
Any Heavy Drinking -- last 2 weeks	0.069	0.031	0.008	0.1394		0.086	0.023	0.006	0.0023
Annual Marijuana Use	0.076	0.034	0.037	0.0973		0.104	0.032	0.037	<.0001
Any Annual Marijuana Use	0.075	0.049	0.013	0.0141		0.097	0.035	0.010	<.0001
Annual Cocaine Use	0.030	0.003	0.002	0.8628		0.074	0.017	0.007	0.095
Any Annual Cocaine Use	0.053	0.035	0.005	0.081		0.078	0.023	0.004	0.007
Any Illicit Drugs Use Other than Marijuana	0.083	0.049	0.011	0.0216		0.102	0.056	0.013	<.0001
Evenings out	-0.030	-0.056	-0.045	0.0043		-0.010	-0.057	-0.042	<.0001
Materialism Index	-0.007	0.000	-0.008	0.185		0.045	-0.002	-0.001	0.8431
Locus of Control Index (collapsed version)	-0.038	-0.021	-0.005	0.2598		-0.114	-0.042	-0.010	<.0001
Self-esteem Index (collapsed version)	-0.016	-0.014	-0.004	0.4855		-0.048	-0.028	-0.007	0.0003
Social Support/Loneliness Index (collapsed version)	-0.035	-0.040	-0.010	0.0389		-0.051	-0.039	-0.010	<.0001
	MALES					*MALES*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|		Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	-0.066	-0.056	-0.057	0.0783		-0.172	-0.088	-0.095	<.0001
College Plans	-0.068	-0.086	-0.051	0.0017		-0.229	-0.168	-0.102	<.0001
30-Day Cigarette Smoking	0.107	0.030	0.023	0.2843		0.162	0.078	0.056	<.0001
Any Daily Cigarette Smoking	0.085	0.013	0.003	0.6751		0.139	0.062	0.014	<.0001
Heavy Drinking -- last 2 weeks	0.054	-0.010	-0.009	0.7516		0.093	0.011	0.009	0.3799
Any Heavy Drinking -- last 2 weeks	0.045	-0.011	-0.003	0.7295		0.083	0.013	0.004	0.2326
Annual Marijuana Use	0.010	-0.030	-0.036	0.3167		0.081	0.016	0.019	0.1593
Any Annual Marijuana Use	0.034	0.011	0.003	0.673		0.075	0.019	0.005	0.0703
Annual Cocaine Use	0.003	-0.031	-0.014	0.4598		0.057	-0.012	-0.005	0.4622
Any Annual Cocaine Use	0.026	0.013	0.002	0.6401		0.064	0.005	0.000	0.9916
Any Illicit Drugs Use Other than Marijuana	0.051	0.033	0.008	0.3083		0.078	0.028	0.007	0.0279
Evenings out	-0.028	-0.057	-0.044	0.0568		-0.004	-0.047	-0.034	<.0001
Materialism Index	0.020	0.036	0.012	0.2742		0.046	0.008	0.003	0.4766
Locus of Control Index (collapsed version)	-0.032	-0.002	-0.001	0.9305		-0.096	-0.019	-0.004	0.1021
Self-esteem Index (collapsed version)	0.015	0.037	0.009	0.1867		-0.050	-0.013	-0.003	0.2593
Social Support/Loneliness Index (collapsed version)	0.000	0.008	0.002	0.758		-0.037	-0.020	-0.005	0.0713
	FEMALES					*FEMALES*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|		Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	-0.052	-0.022	-0.024	0.4272		-0.167	-0.085	-0.093	<.0001
College Plans	-0.032	-0.016	-0.010	0.5467		-0.160	-0.090	-0.055	<.0001
30-Day Cigarette Smoking	0.124	0.072	0.054	0.0055		0.152	0.075	0.054	<.0001
Any Daily Cigarette Smoking	0.121	0.062	0.014	0.0156		0.143	0.071	0.017	<.0001
Heavy Drinking -- last 2 weeks	0.098	0.083	0.051	0.0108		0.083	0.044	0.029	<.0001
Any Heavy Drinking -- last 2 weeks	0.090	0.073	0.017	0.0094		0.071	0.034	0.009	0.0011
Annual Marijuana Use	0.143	0.099	0.097	0.0004		0.119	0.052	0.055	<.0001
Any Annual Marijuana Use	0.110	0.089	0.023	0.0009		0.112	0.053	0.015	<.0001
Annual Cocaine Use	0.074	0.038	0.015	0.1043		0.089	0.048	0.020	<.0001
Any Annual Cocaine Use	0.096	0.062	0.009	0.0197		0.090	0.049	0.007	<.0001
Any Illicit Drugs Use Other than Marijuana	0.118	0.078	0.018	0.0055		0.119	0.082	0.020	<.0001
Evenings out	-0.039	-0.057	-0.045	0.035		-0.026	-0.064	-0.048	<.0001
Materialism Index	-0.028	-0.084	-0.025	0.0022		0.055	-0.018	-0.005	0.1194
Locus of Control Index (collapsed version)	-0.048	-0.046	-0.011	0.0631		-0.123	-0.064	-0.014	<.0001
Self-esteem Index (collapsed version)	-0.044	-0.050	-0.014	0.0539		-0.054	-0.043	-0.011	<.0001
Social Support/Loneliness Index (collapsed version)	-0.066	-0.071	-0.018	0.0086		-0.068	-0.063	-0.016	<.0001

a Analyses are limited to those who held paid employment during the school year. Bivariate statistics are Pearson correlations. Multivariate estimates are derived from OLS regressions controlling for: hours of paid work during the school year, parent education level (index) and truancy (index), all treated as continuous predictors; and region, number of parents in the home, mother's paid job status, student earnings from a paid job, student income from other sources, gender (excluded when analyses were conducted separately by gender), race/ethnicity (excluded when analyses were conducted separately by race/ethnicity), and year of administration (grouped into five 5-year groups plus two 3-year groups), all treated as categorial predictors. All tests for significance adjusted to account for effects of the complex sample design. * p<.05; ** p<.01; *** p<.001

Appendix Table 4D Part 2: Spending earnings for family needs. Bivariate and multivariate (OLS) estimates of the relationship between hours of paid work during the school year and outcomes (row entries), contrasting those who do and do not spend 41% or more of earnings **for their family needs**.[a] High school seniors, working for pay during the school year, 1981-2011 by gender and race/ethnicity

	USE 41% or more for FAMILY NEEDS				**DO NOT USE 41% or more for FAMILY NEEDS**			
	WHITES				*WHITES*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	-0.051	-0.020	-0.021	0.5586	-0.187	-0.091	-0.100	<.0001
College Plans	-0.096	-0.102	-0.065	0.0008	-0.226	-0.142	-0.089	<.0001
30-Day Cigarette Smoking	0.164	0.085	0.074	0.0058	0.179	0.078	0.058	<.0001
Any Daily Cigarette Smoking	0.153	0.075	0.019	0.0173	0.159	0.069	0.016	<.0001
Heavy Drinking -- last 2 weeks	0.072	0.019	0.016	0.5891	0.117	0.038	0.029	<.0001
Any Heavy Drinking -- last 2 weeks	0.087	0.042	0.011	0.1765	0.101	0.031	0.009	0.0004
Annual Marijuana Use	0.072	-0.011	-0.013	0.7291	0.116	0.031	0.036	0.0006
Any Annual Marijuana Use	0.076	0.020	0.005	0.5	0.109	0.036	0.010	<.0001
Annual Cocaine Use	0.037	-0.019	-0.009	0.6319	0.085	0.023	0.010	0.0276
Any Annual Cocaine Use	0.067	0.029	0.005	0.3629	0.087	0.022	0.003	0.0321
Any Illicit Drugs Use Other than Marijuana	0.108	0.042	0.011	0.2213	0.122	0.063	0.016	<.0001
Evenings out	-0.044	-0.066	-0.054	0.0286	-0.002	-0.053	-0.039	<.0001
Materialism Index	0.005	-0.027	-0.008	0.4136	0.029	-0.013	-0.004	0.1613
Locus of Control Index (collapsed version)	-0.056	-0.058	-0.014	0.042	-0.134	-0.060	-0.013	<.0001
Self-esteem Index (collapsed version)	0.004	-0.002	-0.001	0.9453	-0.064	-0.039	-0.009	<.0001
Social Support/Loneliness Index (collapsed version)	-0.048	-0.064	-0.016	0.0377	-0.063	-0.050	-0.013	<.0001
	AFRICAN AMERICANS				*AFRICAN AMERICANS*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	0.001	0.007	0.007	0.8419	-0.036	-0.028	-0.030	0.2971
College Plans	0.085	0.035	0.021	0.3215	-0.043	-0.011	-0.007	0.682
30-Day Cigarette Smoking	0.005	0.008	0.004	0.7926	0.065	0.043	0.018	0.1525
Any Daily Cigarette Smoking	0.014	0.010	0.002	0.7503	0.062	0.041	0.006	0.1779
Heavy Drinking -- last 2 weeks	-0.035	-0.051	-0.026	0.2077	0.004	0.002	0.001	0.9601
Any Heavy Drinking -- last 2 weeks	-0.045	-0.067	-0.013	0.0842	-0.001	-0.011	-0.002	0.6861
Annual Marijuana Use	0.030	0.044	0.041	0.2338	0.059	0.053	0.052	0.0709
Any Annual Marijuana Use	0.020	0.052	0.013	0.1794	0.052	0.051	0.013	0.0524
Annual Cocaine Use	-0.061	-0.036	-0.008	0.3879	0.034	0.037	0.009	0.0875
Any Annual Cocaine Use	-0.062	-0.048	-0.003	0.2184	0.024	0.041	0.004	0.1972
Any Illicit Drugs Use Other than Marijuana	-0.030	0.012	0.002	0.7619	0.005	0.025	0.004	0.4733
Evenings out	-0.040	-0.084	-0.067	0.0101	-0.003	-0.016	-0.012	0.5911
Materialism Index	0.040	-0.043	-0.012	0.2471	0.066	0.056	0.016	0.0609
Locus of Control Index (collapsed version)	-0.009	0.001	0.000	0.9774	0.017	0.055	0.013	0.0368
Self-esteem Index (collapsed version)	-0.029	-0.019	-0.004	0.6022	0.053	0.045	0.010	0.0918
Social Support/Loneliness Index (collapsed version)	0.010	-0.008	-0.002	0.8339	0.017	0.012	0.003	0.6256
	HISPANICS				*HISPANICS*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	-0.137	-0.158	-0.165	<.0001	-0.101	-0.023	-0.024	0.4254
College Plans	-0.031	-0.032	-0.019	0.483	-0.071	-0.026	-0.014	0.4308
30-Day Cigarette Smoking	0.036	0.034	0.018	0.5208	0.071	0.054	0.029	0.072
Any Daily Cigarette Smoking	0.013	-0.008	-0.001	0.8842	0.062	0.055	0.010	0.0924
Heavy Drinking -- last 2 weeks	0.006	0.017	0.012	0.7051	0.030	-0.054	-0.037	0.1341
Any Heavy Drinking -- last 2 weeks	-0.008	0.018	0.004	0.7061	0.050	-0.021	-0.005	0.4934
Annual Marijuana Use	0.065	0.058	0.054	0.2108	0.046	0.031	0.033	0.308
Any Annual Marijuana Use	0.049	0.035	0.009	0.4617	0.019	0.000	0.000	0.9953
Annual Cocaine Use	-0.005	0.084	0.031	0.0436	0.032	-0.041	-0.021	0.4343
Any Annual Cocaine Use	-0.008	0.075	0.011	0.1147	0.063	0.022	0.004	0.5323
Any Illicit Drugs Use Other than Marijuana	-0.011	0.030	0.006	0.5485	0.011	-0.024	-0.006	0.447
Evenings out	-0.022	-0.021	-0.017	0.6394	-0.065	-0.125	-0.090	<.0001
Materialism Index	0.009	-0.027	-0.008	0.5941	0.082	0.042	0.012	0.179
Locus of Control Index (collapsed version)	-0.050	-0.017	-0.004	0.6768	-0.022	-0.006	-0.001	0.836
Self-esteem Index (collapsed version)	0.009	0.026	0.006	0.6086	0.023	0.021	0.005	0.4381
Social Support/Loneliness Index (collapsed version)	-0.040	-0.044	-0.010	0.335	0.027	0.037	0.009	0.1907
	ASIAN AMERICANS				*ASIAN AMERICANS*			
	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|	Pearson	Standardized Estimate	Unstandardized Estimate	Pr > |t|
GPA	-0.110	-0.156	-0.167	0.1494	-0.203	-0.133	-0.151	0.002
College Plans	-0.106	-0.129	-0.061	0.2331	-0.145	-0.132	-0.058	0.004
30 day smk	0.051	-0.026	-0.014	0.7803	0.195	0.105	0.055	0.0163
any daily smk	0.065	-0.028	-0.005	0.7894	0.178	0.095	0.018	0.0392
HD 2 weeks	-0.003	0.089	0.048	0.4356	0.172	0.089	0.050	0.0635
any HD 2 wks	-0.053	0.004	0.001	0.9702	0.169	0.103	0.024	0.0347
Annual Marijuana	-0.122	-0.120	-0.080	0.2336	0.159	0.060	0.056	0.1558
any annual MJ	-0.052	-0.085	-0.020	0.435	0.197	0.111	0.028	0.0091
Annual Coke	0.055	-0.011	-0.004	0.8709	0.032	-0.007	-0.003	0.8646
any annual Coke	0.040	-0.036	-0.005	0.6569	0.050	-0.005	-0.001	0.9204
any illict other than MJ	0.081	0.036	0.008	0.7447	0.105	0.072	0.015	0.1352
Evenings out	-0.083	-0.015	-0.012	0.8754	0.105	0.006	0.004	0.8874
materialism index	0.030	-0.090	-0.031	0.459	0.121	0.111	0.035	0.0113
Locus of Control Index (collapsed version)	-0.064	-0.014	-0.003	0.9064	-0.095	-0.071	-0.016	0.0931
Self Esteem Index (collapsed version)	0.005	0.137	0.034	0.2069	-0.024	-0.037	-0.010	0.358
Social Support/Loneliness Index (collapsed version)	-0.037	0.213	0.052	0.0472	-0.017	-0.032	-0.009	0.4507

a Analyses are limited to those who held paid employment during the school year. Bivariate statistics are Pearson correlations. Multivariate estimates are derived from OLS regressions controlling for: hours of paid work during the school year, parent education level (index) and truancy (index), all treated as continuous predictors; and region, number of parents in the home, mother's paid job status, student earnings from a paid job, student income from other sources, gender (excluded when analyses were conducted separately by gender), race/ethnicity (excluded when analyses were conducted separately by race/ethnicity), and year of administration (grouped into five 5-year groups plus two 3-year groups), all treated as categorial predictors. All tests for significance adjusted to account for effects of the complex sample design. * p<.05; ** p<.01; *** p<.001

Appendix Table 5 Part 1: Differences linked to number of parents in the home, total sample and by race/ethnicity

Total Sample: wtd N = 43,931

	Total Mean	Mean Zero Parents	Mean One Parent	Mean Two Parents	T-test for differences: one parent vs two parents. Pr> |t|	Pearson Correlations with Paid Work	Pearson Correlations with Paid Work: Zero Parents	Pearson Correlations with Paid Work: One Parent	Pearson Correlations with Paid Work: Two Parents
12th grade GPA	6.03	5.40	5.76	6.16	<.0001	-0.169	-0.083	-0.094	-0.183
Plans to complete a 4-year college	3.08	2.64	3.05	3.12	<.0001	-0.188	-0.092	-0.127	-0.202
30 day cigarette use	1.72	2.09	1.78	1.67	<.0001	0.155	0.115	0.095	0.166
Drinking in the last 12 months	3.82	3.98	3.79	3.81	0.366	0.115	0.086	0.074	0.129
Drinking in the last 30 days	2.39	2.58	2.35	2.38	0.114	0.109	0.056	0.072	0.122
Heavy drinking in the last 2 weeks	1.83	2.04	1.81	1.82	0.904	0.092	0.058	0.054	0.103
Marijuana use in the last 12 months	2.27	2.64	2.48	2.17	<.0001	0.099	0.053	0.053	0.106
Paid work hours (per week)	7.13	7.79	7.35	7.01	<.0001				
% of total sample		6.00%	21.50%	72.20%					

Whites: wtd N = 33,663 (76% of the total sample)

	Total Mean	Mean Zero Parents	Mean One Parent	Mean Two Parents	T-test for differences: one parent vs two parents. Pr> |t|	Pearson Correlations with Paid Work	Pearson Correlations with Paid Work: Zero Parents	Pearson Correlations with Paid Work: One Parent	Pearson Correlations with Paid Work: Two Parents
12th grade GPA	6.15	5.45	5.89	6.25	<.0001	-0.184	-0.070	-0.104	-0.195
Plans to complete a 4-year college	3.07	2.56	3.03	3.11	<.0001	-0.223	-0.113	-0.184	-0.226
30 day cigarette use	1.81	2.42	1.98	1.73	<.0001	0.183	0.107	0.136	0.185
Drinking in the last 12 months	4.01	4.35	4.17	3.95	<.0001	0.143	0.053	0.125	0.146
Drinking in the last 30 days	2.50	2.74	2.57	2.46	<.0001	0.133	0.030	0.114	0.139
Heavy drinking in the last 2 weeks	1.91	2.16	1.98	1.87	<.0001	0.114	0.039	0.097	0.117
Marijuana use in the last 12 months	2.33	2.81	2.67	2.22	<.0001	0.114	0.028	0.086	0.114
Paid work hours (per week)	7.07	7.89	7.30	6.97	<.0001				
% of Whites		4.60%	18.60%	76.80%					

Appendix Table 5 Part 2: Differences linked to number of parents in the home, total sample and by race/ethnicity

African Americans: wtd N = 3,840 (9% of the total sample)

	Total Mean	Mean Zero Parents	Mean One Parent	Mean Two Parents	T-test for differences: one parent vs two parents. Pr> |t|	Pearson Correlations with Paid Work	Pearson Correlations with Paid Work: Zero Parents	Pearson Correlations with Paid Work: One Parent	Pearson Correlations with Paid Work: Two Parents
12th grade GPA	5.41	5.25	5.36	5.52	0.010	-0.024	-0.019	-0.022	-0.023
Plans to complete a 4-year college	3.15	2.91	3.15	3.22	0.027	-0.005	0.031	0.005	-0.017
30 day cigarette use	1.27	1.42	1.25	1.24	0.571	0.045	0.047	0.002	0.083
Drinking in the last 12 months	2.68	2.90	2.63	2.68	0.489	0.039	0.109	0.016	0.036
Drinking in the last 30 days	1.74	1.96	1.69	1.73	0.568	0.030	0.089	0.012	0.025
Heavy drinking in the last 2 weeks	1.33	1.48	1.29	1.33	0.448	-0.007	-0.007	-0.044	0.025
Marijuana use in the last 12 months	1.87	2.05	1.86	1.84	0.592	0.048	0.054	0.022	0.065
Paid work hours (per week)	7.38	7.55	7.54	7.17	<.0001				
% of African Americans		12.30%	44.10%	43.60%					

Hispanics: wtd N = 3,354 (8% of the total sample)

	Total Mean	Mean Zero Parents	Mean One Parent	Mean Two Parents	T-test for differences: one parent vs two parents. Pr> |t|	Pearson Correlations with Paid Work	Pearson Correlations with Paid Work: Zero Parents	Pearson Correlations with Paid Work: One Parent	Pearson Correlations with Paid Work: Two Parents
12th grade GPA	5.64	5.40	5.51	5.72	0.006	-0.113	-0.084	-0.064	-0.127
Plans to complete a 4-year college	3.05	2.64	3.01	3.13	0.003	-0.073	-0.129	0.006	-0.078
30 day cigarette use	1.47	1.74	1.48	1.42	0.138	0.063	0.082	0.028	0.070
Drinking in the last 12 months	3.51	3.80	3.49	3.47	0.941	0.061	-0.062	-0.005	0.098
Drinking in the last 30 days	2.23	2.45	2.20	2.19	0.888	0.041	-0.095	-0.025	0.082
Heavy drinking in the last 2 weeks	1.73	1.96	1.71	1.70	0.711	0.023	-0.092	-0.034	0.057
Marijuana use in the last 12 months	2.14	2.52	2.37	2.00	<.0001	0.046	-0.087	-0.014	0.079
Paid work hours (per week)	7.42	7.77	7.47	7.34	0.060				
% of Hispanics		9.40%	24.60%	66.00%					

Asian Americans: wtd N = 1,124 (3% of the total sample)

	Total Mean	Mean Zero Parents	Mean One Parent	Mean Two Parents	T-test for differences: one parent vs two parents. Pr> |t|	Pearson Correlations with Paid Work	Pearson Correlations with Paid Work: Zero Parents	Pearson Correlations with Paid Work: One Parent	Pearson Correlations with Paid Work: Two Parents
12th grade GPA	6.61	6.23	6.49	6.66	0.283	-0.191	-0.225	-0.120	-0.204
Plans to complete a 4-year college	3.55	3.00	3.51	3.60	0.140	-0.138	0.067	-0.167	-0.155
30 day cigarette use	1.42	1.72	1.35	1.42	0.268	0.180	0.200	0.049	0.204
Drinking in the last 12 months	2.89	2.52	2.87	2.91	0.979	0.140	0.039	-0.067	0.196
Drinking in the last 30 days	1.78	1.81	1.78	1.78	0.738	0.146	0.025	-0.092	0.204
Heavy drinking in the last 2 weeks	1.43	1.42	1.49	1.42	0.352	0.150	0.158	-0.068	0.194
Marijuana use in the last 12 months	1.74	1.66	1.86	1.72	0.229	0.121	-0.124	-0.050	0.178
Paid work hours (per week)	6.82	7.07	6.67	6.82	0.172				
% of Asian Americans		5.40%	16.10%	78.50%					

AppendixTable 6: Standardized bivariate and multivariate (OLS) estimates of the relationships among hours of paid work during the school year, earnings from work, income from other sources, GPA, and cigarette smoking. High school seniors, working for pay during the school year, 1981-2011

Bivariate (product-moment) correlations

	GPA	30-day cigarette smoking	Hours of paid work	Average earnings per week from work	Average income per week from other sources
GPA					
30-day cigarette smoking	-0.220				
Hours of paid work	-0.169	0.155			
Average earnings per week from work	-0.085	0.092	0.561		
Average income per week from other sources	-0.058	0.071	-0.024	0.049	

Adjusted r-square and multivariate (unstandardized and standardized) regression coefficients with hours of work, earnings from work, and other income predicting GPA and 30-day smoking

OLS regressions predicting:	GPA		30-day cigarette smoking	
adj. r-square	0.0333		0.0286	
Regression coefficients	Standardized	Unstandardized	Standardized	Unstandardized
Hours of paid work	-0.185	-0.203***	0.152	0.108***
Average earnings per week from work	0.022	0.024***	0.005	0.003
Average income per week from other sources	-0.064	-0.060***	0.073	0.045***

*** p<.001