

Knowing younger workers better: information from the NLSY97

Papers from the 10th anniversary conference of the National Longitudinal Survey of Youth, 1997 cohort, addressed schooling, employment, adolescent behaviors, and many other aspects of youths' lives

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For more than 40 years, the U.S. Department of Labor has undertaken a series of major, national studies that track labor force behavior. These studies follow the same men and women, year after year, and by doing so reveal much about what affects wages and hours of work, how new skills influence success in the job market, how health and schooling interact to influence careers, and how unexpected events—from plant closings and bad weather to product innovations and the openings of new markets—affect earnings. The National Longitudinal Surveys (NLS) program has become one of the Nation's most respected and influential sources of data about the work force since its inception in 1966, administered through the Employment and Training Administration until 1984 and through BLS thereafter. The NLS program consists of seven samples of men and women who have been surveyed periodically and have reported on many of their behaviors in and related to labor markets. These surveys have been used in thousands of research projects within the Government and in research universities and analytic think tanks. The studies constitute a major component of what researchers now know about the roles of schooling, intellectual ability, health, mi-

gration, community, and family in developing the “human capital” and “social capital” that influence the distribution of earnings in the United States and the level of our Nation's gross domestic product.

In May 2008, BLS hosted a conference to highlight new research using the most recent data from one of these data sources, the National Longitudinal Survey of Youth, 1997 cohort (NLSY97).¹ This survey of young people born from 1980 to 1984 (age 12 to 17 in the first year of the survey) has now taken place for 10 consecutive years. The face-to-face interview of these youths asks about their schooling, employment, adolescent behaviors, and many other aspects of their lives. In the data that were available for study at the time of the conference, these nearly 9,000 men and women from across the Nation were only in their early- to mid-20s, but already their reported experiences and behaviors revealed important facts that will have an impact on the labor force for decades to come. This article offers a brief and informal characterization of a few of the studies on which presenters reported at the conference. The conference presentations were based on preliminary research findings of these studies that are now undergoing peer scrutiny prior to official publication in

scholarly journals and books. (See the box.)

Employment

Changing characteristics of youth. Employment of the NLSY97 youths is perhaps the central behavior of interest. One important paper concerning employment presented at the conference was written by Joseph Altonji, Prashant Bharadwaj, and Fabian Lange from Yale University and entitled “Changes in the Characteristics of American Youth: Implications for Adult Outcomes.” The paper asks what one can predict today about the labor force 20 years from now when the NLSY97 cohort will be in its peak earning years. The analysis is based on the experiences of the National Longitudinal Survey of Youth 1979 Cohort (NLSY79)—an earlier NLS cohort, fielded in 1979—with

respondents born between 1957 and 1964. The authors use the relationship between early labor-market-relevant characteristics of youths in the NLSY79 and their subsequent mid-career labor market outcomes to predict mid-career labor market outcomes of the NLSY97 cohort on the basis of their current characteristics.

The paper comprises two parts. In the first, the authors “create a set of youth characteristics that correlate with adult outcomes and are comparable across the NLSY97 and the NLSY79.” Even though the authors attempt to make the two data sets directly comparable, differences in sampling, attrition, and questions make this a complicated exercise. For example, the NLSY97 was sampled at younger ages (12–17) than the NLSY79 (14–22). Although a greater percent of youths eligible for the sample were actually interviewed in the first round of the NLSY97,

Tenth Anniversary Conference Papers, NLSY97, May 29–30, 2008

Joseph G. Altonji, Prashant Bharadwaj, and Fabian Lange, “Changes in the Characteristics of American Youth: Implications for Adult Outcomes.”

Joseph G. Altonji, Sarah Cattan, and Iain Ware, “Sibling Influences on Teenage Risky Behaviors.”

Alison Aughinbaugh and Rosella M. Gardecki, “Attrition in the National Longitudinal Survey of Youth 1997.”

Philippe Belley, Marc Frenette, and Lance Lochner, “Post-Secondary Attendance by Parental Income: A Canada-U.S. Comparison.”

Dan A. Black, Kerwin Charles, and Seth Sanders, “The Problem with Men.”

Dan A. Black, Robert T. Michael, and Kanru Xia, “The Propensity to be an NLSY97 Respondent: Evidence from the Screener Data.”

A. Rupa Datta Parvati Krishnamurty, “High School Experience: Comparing Self-Report and Transcript Data from the NLSY97.”

Keith Finlay, “Effect of Employer Access to Criminal History Data on the Labor Market Outcomes of Ex-Offenders and Non-Offenders.”

Tricia Gladden and Charles Pierret, “Employment Before Age 16: Does it Make a Difference?”

Jeffrey Grogger, “Speech Patterns and Black-White Wage

Inequality.”

Carolyn J. Hill, Harry J. Holzer and Henry Chen, “Against the Tide: Household Structure, Opportunities, and Outcomes among White and Minority Youth,” chapters 3 and 4.

Robert Kaestner and Michael Grossman, “Effects of Weight on Adolescent Educational Attainment.”

Jennifer Manlove, Mindy E. Scott, Erum Ikramullah, Kate Perper, and Emily Lilja, “Relationship Context and the Transition to a Nonmarital Birth.”

Kristin Moore, and Kassim Mbwana, “Preventing Risky Sex and Adolescent Parenthood: Does the Effectiveness of Parenting Practices Differ For Children with Varied Risks?”

Randall J. Olsen, “The Desirability of Partner Traits and Two Decades of Change in the Marriage Market: A One-and-a-Half Sex Model of Marriage.”

Michael R. Pergamit, “Who Runs Away from Home? An Exploratory Analysis.”

James R. Walker, “Choice, Enrollment and Educational Attainment within the NLSY79 and NLSY97.”

Kenneth I. Wolpin, and Antonio Merlo, “Youth Crime and High School Completion.”

Lawrence Wu and Pamela Kaufman, “Two Decades of Change in Premarital First Births: Cohort Comparisons from the NLSY79 and NLSY97.”

NOTE: Many of those papers which are available can be found online at: <http://harrisschool.uchicago.edu/research/conferences/NLSYConf/>

subsequent attrition has been higher. Because they were younger when they were first interviewed, NLSY97 sample members had more years to drop out of the survey before age 22, when many of the characteristics that the authors study are measured. The authors devote a great deal of effort to ensuring that any differences in measured characteristics are real and not an artifact of survey differences.

The authors' most substantive finding is important: they find that the NLSY97 had more skills at the age of 22 than the NLSY79 did. The greatest advantage of the NLSY97 was in education; along all measured dimensions of educational attainment, the younger cohort was clearly superior to the older cohort. By age 22, the 1997 cohort had completed more than one-third of a year more of school, was more likely to have a high school diploma—or, failing that, to have a GED—and was much more likely to still be attending school or to have finished 14 years of school than the 1979 cohort. This skills advantage manifested itself in significant gains on the Armed Forces Qualifying Test (AFQT), the test the military uses to determine skill levels when making admission and job assignments. These gains were especially remarkable for minority youth, with African Americans' (or Blacks') scores improving by 36 percent and Hispanics' scores improving by 24 percent between the two cohorts (compared with a 5 percent improvement for Whites). Gains in parents' education were also significant, with the average NLSY97 youth having a mother with 1 year more of education and a father with three-quarters of a year more education than the mother and father of the youth's counterpart in the NLSY79.

Where the 1997 cohort falls short in comparison with the 1979 cohort is in the area of family structure. A much larger percentage (47 percent versus 25 percent) of the 1997 cohort was living in families in which one of the parents was not present. So although parents of the younger cohort had more skills to impart to their children, they had less contact with their children.

The second part of the Altonji, Bharadwaj, and Lange paper uses the reported childhood experiences from the 1979 and 1997 cohorts, along with the experiences from adulthood from the 1979 cohort, to predict outcomes for the 1997 cohort as adults. Using the characteristics derived in the first part of the paper, the authors estimate the impact that changes in skill level will have on the wage distribution when the cohort has reached middle age. Overall, they expect wages to increase by 6 percent to 7 percent, though the increase will be greater at the upper end of the distribution and lesser at the lower end. This means an increase in inequality over the next decades.

The authors suggest that increases in skills for groups

that were relatively disadvantaged in the 1979 cohort, however, will result in diminishing gaps between the sexes and among races. Black and Hispanic males will gain significantly on white males except at the very top of the wage distribution. From the bottom of the wage distribution to the 90th percentile, the wage gap should close by about 4 percentage points for both black and Hispanic males relative to white males. Similarly, wage gains for females should exceed those of males, causing the wage gap between the sexes to decrease by around 2 percentage points. Within-group inequality will grow as skills become more unequal within groups, but average skills across sex and race groups will become less unequal, resulting in less wage inequality across groups. So while the increase in inequality that has plagued the economy for the last 30 years is likely to continue, it will be based less on race and sex than it has been in the past.

The authors remind readers that their conclusions rest, necessarily, on the assumptions that the labor market premium or discount for a racial or ethnic group or for one sex or the other remains the same over time. Similarly, their expectations of the future labor market do not take into account broader questions pertaining to how the financial returns of schooling will change as markets and products develop or how the continued competitiveness of global markets might affect labor market trends. In this sense, the analysis undertaken by Altonji, Bharadwaj, and Lange offers only a partial answer to the question of how the workforce will fare in the years ahead, but their answer, cautiously constructed and conditioned as it is, uses these NLSY longitudinal data sets in the best way possible and offers a decidedly optimistic assessment of future developments in the labor force.

Employment before age 16. Another paper from the conference that focuses on employment is one that exploits the NLSY97's data on work history and its links across several domains to examine the consequences of employment at a very young age among the youths in the cohort. Tricia Gladden and Charles Pierret from the Bureau of Labor Statistics use the extensive data on very early employment in the NLSY97 in their paper "Employment Before Age 16: Does it Make a Difference?" They point out that collecting information on teen employment was a key reason that the survey was started. Standard labor market surveys such as the Current Population Survey only report about employment starting at age 16. However, a majority of youths in the NLSY97 reported doing some work for pay before this age. Gladden and Pierret posit that it is unclear whether early employment is ultimately beneficial

to these youths. On the one hand, early employment may teach important lessons such as responsibility, perseverance, and self-reliance and allow youths to accumulate experience that will prove useful later in their careers. On the other hand, early employment may be distracting, taking youths away from educational and developmental activities that will prove more beneficial than the menial jobs that are available to young workers. It may also introduce them to older youths who are engaged in behaviors that are not age-appropriate for the young workers. Gladden and Pierret's paper explores the correlation between youth employment and a number of outcomes in the late teen years as a first attempt to measure the effects of early employment.

The NLSY97 interviewed youths as young as 12 and asked them to report on jobs they held at any time after their 12th birthday. Because these children were not legally able to hold a job with an employer, the NLSY97 concentrated on "freelance jobs" among this group. These are informal jobs such as babysitting or yard work where the employee works directly for the ultimate consumer of the service, usually on an as-needed basis. Respondents older than 14 were also asked about traditional "employee jobs"—that is, those in which the youth worked for an employer who provided goods or services to many consumers. Restaurants and retail establishments provided typical employee jobs for teens in the sample.

Gladden and Pierret identify respondents who worked in freelance jobs between the ages of 11 and 15 and those who worked in employee jobs at 14 or 15. They then follow these youths until the age of 20, examining various outcomes along the way. Two findings are notable from this research. First, once youths enter the labor force, they tend to continue to work throughout their teen years. Between 80 percent and 90 percent of youths who worked at a given age worked again at the next age. Thus, those who start young will likely continue to work at least part of the year until age 20. Second, after controlling for standard background variables (race, sex, income, family structure, parents' education, and AFQT score) working at freelance jobs at young ages is correlated with a number of negative outcomes. Those who worked at freelance jobs before age 15 achieved less schooling by age 20; smoked, drank alcohol, and used marijuana more often before age 16; and were more likely to carry a handgun, assault someone, or be arrested by age 18 than youths who waited until age 16 for their first job. Gladden and Pierret are quick to point out that this may be largely an effect of selection—those who are likely to work at a young age may also be the type to want less schooling and to engage in substance abuse

and delinquent behavior, in which case the correlation does not imply that working per se causes these behaviors. But the link between early employment and these outcomes certainly warrants further investigation.

Access to criminal records. One of the attractive features of the NLSY97 data set is that it captures a lot of information that is tangentially related to employment. One of these pieces of information is the youth's criminal record—the data include information on many illegal actions that resulted in arrests, convictions, periods of incarceration, and other run-ins with the law. Incarcerations, naturally, influence labor market behavior, especially when youths are incarcerated long enough to prevent them from participating in the regular labor market. The NLSY97, being a longitudinal data set, can be used to assess the impact of the incarceration on subsequent employment.

Keith Finlay from Tulane University, in his paper "Effect of Employer Access to Criminal History Data on the Labor Market Outcomes of Ex-Offenders and Non-Offenders," uses the information about incarceration and subsequent employment along with one other piece of information—the State in which the young man or woman resides post incarceration. He points out that over the interval of interest for these cohorts of youths—1997 to 2003—some 16 States, starting with Florida in 1997, adopted the practice of releasing on the Internet information from the criminal records of all convicted felons. Finlay studies the employment experience of people who have and have not been incarcerated, in States with and without Internet reporting. An employer may have a notion that a job applicant of a particular type—age, sex, race, or ethnic group, for example—is more likely to have a criminal record. If this notion causes the employer not to hire someone of that type, this is a phenomenon called "statistical discrimination." However, argues Finlay, in a State that puts information concerning people's criminal records on the Internet—making it easy for employers to determine whether a particular job candidate is a convicted felon—employers have far less reason to "statistically discriminate" against non-felons. In short, this State policy is expected to be detrimental to the employment prospects of people who have been incarcerated but to be helpful to those from high-incarcerated groups who have not themselves been jailed.

Finlay explains that there are 369 NLSY97 respondents who have been incarcerated as adults (4.4 percent of his whole sample). For men age 19, the cumulative rates of adult incarceration were: 3 percent of white males, 8 percent of African-American males, 4 percent of Hispanic

males, and less than 1 percent of each of the three groups of females. For men age 24, however, the cumulative rates of those same six groups were dramatically higher: 8 percent of white males, 19 percent of African-American males, 12 percent of Hispanic males, and 2 percent to 3 percent of the respective groups of females.

Finlay studies the relationship between incarceration and employment, wages, and earnings; his findings confirm his expectations: “ex-offenders are less likely to be employed, have lower wages, and have lower earnings in [S]tates with Internet sites providing information about ex-offenders.” And the magnitude of this effect is considerable: in the open-records States, ex-offenders have a 5-percentage-point lower likelihood of employment, 9 percent lower hourly wages and 19 percent lower annual earnings. The evidence is less striking, but again affirming, for the effects of open records for non-offenders from groups with high rates of incarceration; however, the association is not statistically significant.

Education

Educational attainment. Education is certainly a key factor in the attainment of a successful career. The NLS data sets, with their depth of information on the educational experiences of cohorts 20 years apart, provide excellent data on the change in educational attainment over the last 2 decades. James Walker of the University of Wisconsin at Madison, in his paper titled “College Choice, Enrollment and Educational Attainment in the NLSY79 and NLSY97,” provides a detailed comparison of the two cohorts and emphasizes some fascinating developments in the educational attainment of individuals in the two data sets at ages 24 or 25. He reports an increase in mean years of schooling of 0.4 year from the 1979 cohort to the 1997 cohort; median years of schooling increased from 12 years for the 1979 cohort to 13 years for the cohort of 1997. Somewhat surprisingly, the interquartile range of schooling increased dramatically, from 1.5 years in the NLSY79 to 3.5 years in the NLSY97.

Walker documents a substantial decline in the percentage of people who did not obtain a high school diploma or pass the General Educational Development (GED) tests. Among males, for example, this fraction dropped from 14.8 percent in the 1979 cohort to just 7.6 percent in the 1997 cohort. For women, the drop was a bit less dramatic, from 11.8 percent in the 1979 cohort to 7.8 percent in the 1997 cohort. One can see the same pattern of improvement in education when considering those without a high school degree—either dropouts or those with GEDs. The

percentage of men without a high school degree declined from 23.8 percent in the 1979 cohort to just 16.7 percent in the 1997 cohort. For women, the gain is again somewhat muted; in the 1979 cohort, 19.7 percent of women did not have a high school degree, but by the 1997 cohort the figure had shrunk to 15.1 percent. This decline represents a substantial improvement in human capital across these two cohorts.

Results at other levels of education are equally encouraging. About 20.9 percent of men in the 1979 cohort had a bachelor’s degree, a figure that increased to 24.2 percent in the 1997 cohort. For women, the increase was astonishing; in the 1979 cohort, 18.6 percent had a bachelor’s degree, but by the 1997 cohort, 30.4 percent of women had a bachelor’s degree. Thus, in the 1979 cohort, there were 1.12 men for each woman with a bachelor’s degree, but by the 1997 cohort, this had fallen to just 0.80 man per woman.

This striking change reflects a difference between the sexes in college enrollment rates—while men’s attendance at 4-year universities increased from 34.3 percent to 42.3 percent, women’s attendance at 4-year universities increased from 30.9 percent to 47.8 percent. The graduation rate conditional on attending 4-year universities declined for men from 60.9 percent in the 1979 cohort to 57.2 percent in the 1997 cohort. Despite the large increase in college attendance among women, their graduation rate increased from 60.2 percent to 63.6 percent. Thus, in the 1997 cohort, women were more likely than men to attend university, and those who did were more likely than men to graduate.

African Americans, too, made considerable progress, although the gains are much more concentrated in the upper end of the distribution for Blacks than for Whites. For instance, the percentage of black respondents who did not obtain either a GED or a high school diploma declined from 16.5 to 13.5 from the 1979 cohort to the 1997 cohort, whereas the corresponding percentage of white respondents declined from 11.3 to 5.8. Thus, despite starting from a smaller percentage of nongraduates, Whites experienced a greater decline in the percentage who did not obtain either a GED or high school diploma than did Blacks. Similarly, the percentage of black respondents without a high school degree was essentially unchanged, increasing from 25.2 in the 1979 cohort to 25.3 in the 1997 cohort. For Whites, however, that percentage dropped from 19.0 in the 1979 cohort to 13.2 in the 1997 cohort. Progress was even more dramatic for Hispanics. In the 1979 cohort, 36.5 percent of respondents did not have a high school degree, but this dropped to 19.6 percent in

the 1997 cohort. Thus, in one generation, African Americans replaced Hispanic Americans as the group having the highest fraction of youth without a high school degree.

At the other end of the distribution, however, African Americans showed a much more substantial improvement than did Hispanics. In the 1979 cohort, 8.5 percent of the African American population had a bachelor's degree by age 25, but this percentage grew to 15.0 by the 1997 cohort. In contrast, in the 1979 cohort, 9.4 percent of Hispanics had a bachelor's degree by age 25, but this grew much less rapidly, to 11.7 percent in the 1997 cohort. By comparison, the percentage of whites with a bachelor's degree grew from 23.9 in the 1979 cohort to 32.6 in the later cohort.

Thus, there is a very distinctive pattern among the three major race/ethnic groups. For Whites, education levels have increased across the distribution, with fewer who fail to obtain a high school degree and an ever-greater proportion obtaining a bachelor's degree. The 1980s and 1990s were a period of spectacular increase in the returns to investment of schooling, and the change in the behavior of the white Americans in the cohort is generally and properly viewed as a response to that increase in returns. In contrast, the Hispanic Americans in the cohort exhibited a modest growth in the proportion obtaining a bachelor's degree but a substantial decline in the proportion without a high school degree. Thus, the distribution of education levels among Hispanics became much more concentrated in younger cohorts. African Americans had a substantial expansion in the proportion with a bachelor's degree but virtually no change in the proportion without a high school degree. Thus, the distribution of educational levels among African Americans became more diffuse in the younger cohorts. Understanding the reasons for these three distinct changes in the distribution of educational levels will be an important goal for future research.

Walker also reports differences in educational attainment by the respondents' scores on the Armed Forces Qualification Test (AFQT). He divides the respondents into thirds ("terciles"), and reports the educational attainment of each. Here, again, the news is good: in each ability tercile the fraction without a high school degree declined and the fraction with a bachelor's degree increased. Not surprisingly, the largest drop in the proportion of people without a high school degree was in the lowest tercile of AFQT scores. In the 1979 cohort, 39.5 percent of the lowest ability third did not receive a high school degree, but this fell to 35.3 percent in the 1997 cohort. Walker also documents a large increase in the proportion of people getting a GED in this bottom tercile: 11.3 percent did so

in the 1979 cohort, whereas 14.3 percent did so in the 1997 cohort. The largest growth in the proportion with a bachelor's degree occurred in the middle tercile of AFQT scores, a rise from 18.2 percent in the 1979 cohort to 22.1 percent in the 1997 cohort.

The effects of parental resources. A similar pattern emerges when Walker partitions the sample into terciles by parents' income, measured in the first round for both cohorts. From the 1979 cohort to the 1997 cohort, in each tercile the proportion without a high school degree declined, and the proportion with a bachelor's degree increased. There is one important difference in the results for parental income compared with the results for the AFQT. The greatest gain in the proportion obtaining a bachelor's degree occurred in the lowest tercile of the AFQT score distribution but in the highest tercile of parental income. Indeed, there is a strong monotonic relationship between income and the percentage point gain in the proportion with a bachelor's degree: the highest tercile had an 11.4-percentage-point increase, the middle tercile had a 7.8-percentage-point increase, and the lowest tercile only had a 1.7 percentage-point increase. Thus, the correlation between the possession of a bachelor's degree and parental income became even stronger in the younger cohort.

This increased correlation of educational attainment and parental income suggests a growing importance of parental resources in determining who can afford college. In a paper they presented at the recent NLSY97 conference, Philippe Belley and Lance Lochner of the University of Western Ontario and Marc Frenette of Statistics Canada reported on a preliminary investigation that is further exploring this correlation using the NLSY97 and a Canadian longitudinal data set.² They expand upon a paper that Belley and Lochner recently published in the first issue of the *Journal of Human Capital*;³ in it, Belley and Lochner use a structural model and the NLSY79 and NLSY97 to estimate the impact of parental resources on educational attainment. Consistent with several other studies, Belley and Lochner find that parental income and resources played virtually no role in the determination of enrollment rates for the 1979 cohort. For the 1997 cohort, however, parental resources were much more important in determining who attended college. The paper explains that parental income is important because students are constrained from borrowing against their future earnings. Thus, though it makes economic sense to attend college, many members of the younger cohort were able to do so only if their parents could help them financially.

Both the paper published in the *Journal of Human Cap-*

ital and the paper presented at the conference highlight a potentially serious problem in American higher education. In the years between the two cohorts, the cost of high-quality university education has skyrocketed. For instance, the Chicago Tribune has reported that the cost of sending an in-State student to the University of Illinois at Champaign-Urbana—an elite public institution—now exceeds \$20,000 a year. Because the growth of college tuition and fees has far outstripped the growth in federally funded student loans, one might expect that the increased costs would limit access to costly, elite schools. Nevertheless, Americans face a staggering quantity of choice in higher education with wide variation in prices. Community colleges, for example, often represent an attractive option at a price that is an order of magnitude lower than the cost at an elite school. These drastically lower prices, coupled with the possibility of living at home and avoiding additional costs, could lead one to believe that capital market constraints would not prevent aspiring college students from attending higher education.

However, there exists evidence to the contrary. In a series of papers, Todd R. Stinebrickner of the University of Western Ontario and Ralph Stinebrickner of Berea College examine the behavior of Berea College students. Berea is an especially useful college to study because it charges no tuition and provides students with a modest stipend as payment for a campus job. The policy is intended to assure that no students are excluded from Berea because they cannot afford the tuition bill. Yet, Stinebrickner and Stinebrickner find that despite the free tuition and limited direct cost of attending Berea, family income is still critically important for graduation.⁴ The reason seems to be that there are many events and circumstances—a parent's illness or unemployment, for example—that may make it difficult for students to complete their college studies. Students from wealthier families have a larger number of options available to address these difficulties. Understanding the roles of capital markets and family resources in accessing and completing college is an important research agenda for the future.

Obesity. A topic that has been a focus of much research in health economics is the direction of causality in the strong link between health and schooling. Some researchers suggest that schooling affects health, others suggest that health affects schooling, and still others suggest that there are other factors—third forces—that influence both in the same direction, causing the observed positive association. One of the authors of a paper at the recent NLSY97 conference, Michael Grossman of the City University of

New York Graduate Center, has been the primary scholar in this debate over the past several decades; the paper he and his colleague, Robert Kaestner of the University of Illinois at Chicago, presented at the conference addresses one small piece of this puzzle.⁵

Kaestner and Grossman note that adolescent obesity has risen dramatically in recent years, and they ask whether obesity has an effect on educational attainment among adolescents. If it does, that would be one avenue through which health status influences the level of education. Kaestner and Grossman point out that a relationship between obesity and educational attainment could work in several ways logically, and economic theory alone does not shed much light on which of several potential routes of influence might dominate. Obese adolescents might suffer from discrimination from teachers and/or peers that could adversely affect their schooling, and they might also have related health troubles such as sleeping disorders and depression that could adversely affect their cognitive functioning or cause them to miss days of school. Conversely, overweight youths might engage less in sports and physical activities and even in social activities, and as a result they may spend more, not less, time studying and thus perform better academically. Kaestner and Grossman turn to the NLSY97 data for evidence.

This is a case in which a negative finding is noteworthy. After undertaking a quite thorough study, with sophisticated formal theoretical modeling and statistical analyses, the researchers conclude that there is very little evidence in the NLSY97 data that obesity has any discernible effect on the educational attainment of these young adults, either positive or negative. They study boys and girls separately, looking at the extreme tails of the distribution of weight and noting the highest grade of school attended, the highest grade completed, and whether or not the student dropped out of school. In neither estimates from very simple models nor in Kaestner and Grossman's estimates from quite complex and highly controlled models is there evidence of an effect of weight on schooling. Obesity, they conclude, does not play a direct role in the strong, positive association between health and schooling.

Social Behaviors

Although a primary motivation for the NLS program is a better understanding of the labor market experiences of the workforce, BLS has understood the importance of investigating a wide range of other behaviors, both within the family and in the community, as forces that affect employment, marketable skills, occupation choices and

opportunities, and career trajectories, as well as hours of work, wages, and earnings. The NLS data sets have long been used for studying many types of youth and adult behaviors, and the recent conference suggests that the most recent NLSY97 data have much to contribute to our understanding of family and youth behaviors.

Marriage and offspring. Robert Michael of the University of Chicago, in remarks that opened the conference, pointed to both the continuity and change in demographic trends between the 1979 and 1997 cohorts. The most dramatic trend, he claimed, is found in terms of formal marriage: 8.7 percent of 18-year-old females in the 1979 cohort had married, whereas only 1.6 percent of their counterparts in the 1997 cohort had done so. By age 21 the trend was even more striking, with 33.4 percent of the females from the 1979 cohort married but only 12.1 percent from the 1997 cohort married. Similarly, 15.1 percent of 21-year-old men from the 1979 cohort were married, compared with 5.2 percent from the 1997 cohort. Although these figures reflect the well-documented decline in formal marriage in the United States, if instead one considers the percentage of the 1997 cohort who have formed a dyadic partnership, the numbers look much like the 1979 numbers for formal marriages: 33.1 percent of the females reported having formed a cohabitational partnership, and 19.1 percent of the males reported having done so. The big decline is in formal marriage, not in forming a dyadic partnership.

Concerning the percentage of young mothers, there was essentially no difference between the 1979 and 1997 cohorts—7.8 percent of women in the 1979 cohort had a child by age 18, compared with 7.6 percent of the 1997 cohort. The difference between cohorts in the percentage of those who were mothers by age 21 is also small; 23.2 percent of the NLSY79 met the criteria, compared with 23.8 percent of the NLSY97. For the males, there was a slight increase in reported parentage at age 18, with 1.3 percent of the 1979 cohort having at least one child at age 18, compared with 2.3 percent of the 1997 cohort. By age 21, 8.6 percent of the males from the 1979 cohort reported being a father, compared with 11.2 percent of the males in the 1997 cohort.

Adolescent sexual activity. Researchers from Child Trends, a Washington, DC, think tank that focuses on issues of child development and policy, investigated the risky behavior of adolescent sexual activity and the role that parents play in affecting this behavior.⁶ Kristin Moore and Kassim Mbwana examined whether the youths who were 12–14 at the beginning of the survey began having

sex before age 17 (53 percent did so), whether they used contraceptives or engaged in “unsafe sex” when they did have sex (16 percent were judged to have had unsafe sex in the 12 months before age 17), whether those who were sexually active had multiple partners by the time they turned 17 (some 44 percent had two or more partners), and whether or not they had become teenage parents before turning 18 (6 percent did so). This study examined three aspects of how the teenagers’ parents’ styles of supervision, guidance, and support affected these elements of the youths’ sexual behavior. First, the authors investigated the influences of different parenting styles on sexual risk-taking by adolescents. Second, the researchers examined whether the influence of parenting style varied depending upon the risks that the adolescent faced. Finally, Moore and Mbwana examined whether parental awareness of children’s activities prevented the children from engaging in sexual activity.

The NLSY97 data have considerable detail regarding how parents guide and monitor their children’s social and private lives. One set of measures used in this study—measures that are well-explored by developmental psychologists and believed to be influential in the development of preschool and elementary school children—characterizes parental styles into a four-category typology: some parents are “authoritative” (which means they are rather strict, yet highly supportive, of their adolescent children), others are “permissive” (which means they are not strict, but are quite supportive), others are “uninvolved” (meaning they are neither strict with their children nor supportive), while still others are “authoritarian” (meaning they are strict, but not supportive). Moore and Mbwana’s study borrows this typology and uses it to analyze the influence of parenting styles on the sexual behaviors of adolescents. In particular, the study focuses on the influence of an “authoritative” (strict but supportive) style of parenting.

The findings at this stage in the investigation are robust ones: holding constant many of the known factors that affect adolescent behaviors, authoritative parenting was clearly associated with less sexual risk taking by girls, specifically through later initiation of sex, less unsafe sex, fewer sex partners, and lower rates of teenage parenting. For boys, the effects were not as strong, but where the effects were in evidence—in the age of onset of sexual activity—more authoritative parenting was associated with a delay in the age at first sex.

Greater levels of risky sexual activity occurring among adolescents’ peers, in their schools, and in their neighborhoods were also associated with a higher probability of early sex, unsafe sex, more partners, and teen parenthood;

however, little evidence was found that the importance of parenting varies by risk level. These studies concerning parenting styles control for several important factors that also influence this behavior. For example, adolescents who live with both their biological parents engage in less sexual risk taking, those whose mothers were themselves teenage parents exhibit more risky sexual behaviors, and those who grew up in an impoverished family take more sexual risks.

The last issue that the Moore and Mbwana paper explores is the influence of parental awareness of adolescents' activities, as measured by how well the parents know their child's close friends, how well they know those close friends' parents, whether they know with whom their child spends time when he or she is not at home, and how well they know their child's teachers. The findings suggest that parental awareness results in both boys and girls delaying sexual activity, engaging in less unsafe sex, and being less likely to have multiple sexual partners. The study concludes that "[p]arents matter for all adolescents" in this important arena of sexual risk taking.

The influence of siblings. Another paper presented at the conference also looks within the family at factors that appear to be associated with risky behaviors, but this one focuses on the influence of siblings instead of parenting styles.⁷ Joseph Altonji of Yale, Sarah Cattan of the University of Chicago, and Iain Ware of 3iGroup point out that several studies have found substantial correlations in risky behavior between siblings, raising the possibility that adolescents may directly influence the actions of their brothers or sisters. The researchers note that there is an insightful body of literature in psychology that suggests that such sibling effects may exist, particularly for younger children who look to their older siblings for cues about appropriate teenage behaviors. The authors note, however, that much of the published empirical analyses of sibling effects are compromised by the difficulty of distinguishing direct influences from the impact of shared unobserved factors. Multivariate regressions relating the behavior of siblings undoubtedly reflect the fact that a variety of common influences affect the actions of all siblings in a household, so the fact that siblings behave similarly does not necessarily imply that one child affects his or her brother or sister. Altonji, Cattan, and Ware look at a wide range of risky activities from the NLSY97 data set and find strong positive sibling correlations. The primary contribution of the paper is their assessment of the extent to which these correlations are due to causal effects from one sibling to another.

The researchers articulate a sibling model of consumer choice that serves as a basis for their econometric identification strategy. It is based on the fact that the behavior of a child at a given point in time cannot directly influence a sibling's actions in a prior year. The authors also assume that the direction of any influence is from an older sibling to a younger sibling. They estimate a joint dynamic model of the behavior of older and younger siblings that allows for family effects, individual specific heterogeneity, and past choices. Their results suggest that smoking, drinking, and marijuana use are influenced by the example of older siblings, although much of the link between siblings reflects association rather than causation.

Running away from home. One of the more unusual topics explored at the recent conference addressed the issue of adolescents running away from home.⁸ In his paper, Michael Pergamit of the Urban Institute explains what the published literature reveals about runaways. He states that nearly all the available information regarding this phenomenon comes from samples of youths in homeless shelters, in crisis centers, or living on the street; these data sources, unfortunately, do not permit analysts to compare youths who have run away with those who have not. For example, one cannot investigate the prevalence of running away using data of that nature, nor can one track how runaways and youths who have never run away differ in their developmental pathways prior to or after running away. Moreover, the information about the family and schooling experiences prior to running away are, in the shelter samples, necessarily collected after the running away episode and may thereby be tainted or shaded by the experience itself.

The NLSY97 annually asked the youths if they had ever run away from home. The survey used the definition supplied by the Department of Justice, that running away is "staying away at least one night without parents' prior knowledge or permission." Each year, as long as the youth was residing with parents and was under age 18, he or she was asked about incidents of running away occurring since the previous interview; consequently, this study captures a sample of runaways that reflects the whole set of children who ran away, not just those who ended up in shelters or crisis centers. In some cases, the data also include key information about the youth from years prior to episodes of running away. The paper exploits these features of the NLSY97 data, focusing primarily on children who were age 12 or 13 in the first year of the study.

The prevalence of running away is itself one of the most interesting findings in this paper, which estimates that of

the roughly 20 million U.S. youths born between 1980 and 1984, some 17.8 percent had run away by the age of 18. The rate is higher for females—19.8 percent—than for males—15.8 percent. It is also slightly higher for Hispanic youths than for Whites or African Americans: 19.4 percent of Hispanics and 17.4 percent of both Whites and African Americans had run away by age 18. Of all children who had run away, about half had done so only once, but approximately 10 percent had done so seven or more times; of the youths who reported incidents of running away, the average number of these incidents was 3.3. About one-third of children who ran away had done so before age 14.

In a statistical model that identified which adolescents had run away from home while controlling for several attributes, it is interesting that the sex of the adolescents was not a factor. As if to illustrate the challenge of summarizing findings from complex studies, however, the paper notes that boys who did run away did so less often than girls but that boys did so at a younger age than girls. African Americans and Hispanics were both less likely to run away than were Whites after statistical controls were introduced. Similarly, having siblings had no apparent effect on running away. Children with higher scores on the AFQT were less likely to run away, while, as one might expect, youths who had a poor relationship with parents, who scored high on measures of behavioral problems, or who had mental health problems were significantly more

likely to run away. Urban youths were much more likely to run away than youths in rural settings. The study also finds that “the more things the family does together the lower is the probability of running away.” The author notes that it will be important to track the effects of running away on the life trajectories of these young men and women as they age through their 20s and beyond. This is surely one of the key benefits of a data set like the NLSY97 that identifies behaviors and events early in life and can then reveal whether that behavior is associated with later life events, and, if so, to what extent.

THE FINDINGS BRIEFLY SUMMARIZED IN THIS ARTICLE represent about half the research papers delivered at the Tenth Anniversary Conference in May 2008. In turn, the papers presented at the conference reflect only a small portion of the new facts and relationships discovered so far by researchers working with the NLSY97 data sets. Assuming the survey respondents continue to be willing to accept the request for an hour-long interview each year, as their lives unfold over the next decade or so, researchers’ understanding of the U.S. labor market and the behavior of the cohort born between 1980 and 1984 will continue to grow. The ever-improving understanding of the forces shaping labor market experiences should help policymakers, and the deeper understanding of the consequences of private decisions should be of value to families everywhere. □

Notes

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² Philippe Belley, Marc Frenette, and Lance Lochner, “Post-Secondary Attendance by Parental Income: A Canada-U.S. Comparison.” Paper presented at the NLSY97 Tenth Anniversary Conference, Washington, DC, May 2008.

³ Philippe Belley and Lance Lochner, “The Changing Role of Family Income and Ability in Determining Educational Achievement,” *Journal of Human Capital*, Winter 2007, pp. 37–90.

⁴ Ralph Stinebrickner and Todd R. Stinebrickner, “Understanding Educational Outcomes of Students from Low-Income Families: Evi-

dence from a Liberal Arts College with a Full Tuition Subsidy Program,” *Journal of Human Resources*, Summer 2003, pp. 591–617.

⁵ Robert Kaestner and Michael Grossman, “Effects of Weight on Adolescent Educational Attainment.” Paper presented at the NLSY97 Tenth Anniversary Conference, Washington, DC, May 2008.

⁶ Kristin Moore and Kassim Mbwana, “Preventing Risky Sex and Adolescent Parenthood: Does the Effectiveness of Parenting Practices Differ For Children with Varied Risks?” Paper presented at the NLSY97 Tenth Anniversary Conference, Washington, DC, May 2008.

⁷ Joseph G. Altonji, Sarah Cattan and Iain Ware, “Sibling Influences on Teenage Risky Behaviors.” Paper presented at the NLSY97 Tenth Anniversary Conference, Washington, DC, May 2008.

⁸ Michael R. Pergamit, “Who Runs Away from Home? An Exploratory Analysis.” Paper presented at the NLSY97 Tenth Anniversary Conference, Washington, DC, May 2008.