

2004

# Maternal Employment and Adolescent Self-Care

Leonard M. Lopoo

*Syracuse University. Center for Policy Research, LMLOPOO@MAXWELL.SYR.EDU*

Follow this and additional works at: <http://surface.syr.edu/cpr>



Part of the [Sociology Commons](#)

---

## Recommended Citation

Lopoo, Leonard M., "Maternal Employment and Adolescent Self-Care" (2004). *Center for Policy Research*. Paper 104.  
<http://surface.syr.edu/cpr/104>

This Working Paper is brought to you for free and open access by the Maxwell School of Citizenship and Public Affairs at SURFACE. It has been accepted for inclusion in Center for Policy Research by an authorized administrator of SURFACE. For more information, please contact [surface@syr.edu](mailto:surface@syr.edu).

**Center for Policy Research  
Working Paper No. 59**

**MATERNAL EMPLOYMENT AND  
ADOLESCENT SELF-CARE**

**Leonard M. Lopoo**

**Center for Policy Research  
Maxwell School of Citizenship and Public Affairs  
Syracuse University  
426 Eggers Hall  
Syracuse, New York 13244-1020  
(315) 443-3114 | Fax (315) 443-1081  
e-mail: [ctrpol@syr.edu](mailto:ctrpol@syr.edu)**

**March 2004**

**\$5.00**

Up-to-date information about CPR's research projects and other activities is available from our World Wide Web site at [www-cpr.maxwell.syr.edu](http://www-cpr.maxwell.syr.edu). All recent working papers and Policy Briefs can be read and/or printed from there as well.

# CENTER FOR POLICY RESEARCH – Spring 2004

**Timothy Smeeding, Director**  
**Professor of Economics & Public Administration**

---

## Associate Directors

Margaret Austin  
Associate Director,  
Budget and Administration

Douglas Holtz-Eakin  
Professor of Economics  
Associate Director, Center for Policy Research

Douglas Wolf  
Professor of Public Administration  
Associate Director, Aging Studies Program

John Yinger  
Professor of Economics and Public Administration  
Associate Director, Metropolitan Studies Program

## SENIOR RESEARCH ASSOCIATES

Dan Black..... Economics  
Stacy Dickert-Conlin..... Economics  
William Duncombe ..... Public Administration  
Gary Engelhardt ..... Economics  
Deborah Freund ..... Public Administration  
Madonna Harrington Meyer ..... Sociology  
Christine Himes..... Sociology  
William C. Horrow ..... Economics  
Bernard Jump ..... Public Administration  
Duke Kao ..... Economics  
Eric Kingson ..... Social Work  
Thomas Kniesner ..... Economics  
Jeff Kubik ..... Economics

Andrew London ..... Sociology  
Len Lopoo ..... Public Administration  
Jerry Miner ..... Economics  
John Moran ..... Economics  
Jan Ondrich ..... Economics  
John Palmer ..... Public Administration  
Lori Ploutz-Snyder .. Health and Physical Education  
Jeff Racine ..... Economics  
Grant Reeher..... Political Science  
Stuart Rosenthal..... Economics  
Ross Rubenstein ..... Public Administration  
Michael Wasylenko..... Economics  
Janet Wilmoth..... Sociology

## GRADUATE ASSOCIATES

Anna Amirkhanyan..... Public Administration  
Beth Ashby..... Economics  
Dana Balter ..... Public Administration  
Gabby Chapman ..... Economics  
Yong Chen ..... Economics  
Christopher Cunningham ..... Economics  
Ana Dammert..... Economics  
Tae Ho Eom..... Public Administration  
Val Episcopo ..... Sociology  
Mike Eriksen ..... Economics  
Kate Farrar..... Public Administration  
Garey Fuqua ..... Public Administration  
Jose Galdo..... Economics  
Andrzej Grodner..... Economics  
Glenda Gross..... Sociology  
Anil Kumar ..... Economics

Kristina Lambright ..... Public Administration  
Xiaoli Liang ..... Economics  
Liquan Liu ..... Economics  
Joseph Marchand ..... Economics  
Cristian Meghea ..... Economics  
Desmond Nation..... Public Administration  
Emily Pas ..... Economics  
Seth Richards ..... Public Administration  
Cynthia Searcy ..... Public Administration  
Claudia Smith ..... Economics  
Sara Smits ..... Sociology  
Adriano Udani..... Public Administration  
Wen Wang..... Public Administration  
Bo Zhao ..... Economics  
Na Zhao..... Sociology

## STAFF

Kelly Bogart ..... Administrative Secretary  
Martha Bonney..... Publications/Events Coordinator  
Karen Cimilluca..... Librarian/Office Coordinator  
Kim Desmond ..... Administrative Secretary  
Kati Foley.....Administrative Assistant, LIS

Kitty Nasto .....Administrative Secretary  
Candi Patterson..... Computer Consultant  
Mary Santy .....Administrative Secretary  
Mindy Tanner ..... Admin. Secretary/Receptionist

## **Abstract**

Mounting evidence shows that self-care produces deleterious consequences for adolescents in the U.S. Since descriptive evidence suggests that maternal employment is the primary explanation for adolescent self-care, maternal employment, it is frequently argued, is harming children. Heretofore, very little empirical research has actually investigated the impact of maternal employment on adolescent self-care, however, calling into question this assertion. This paper aims to fill this gap.

The author uses the National Education Longitudinal Survey of 1988 supplemented by the National Longitudinal Survey of Youth–1979 to estimate the relationship between maternal employment and adolescent self-care. Unlike prior research, the author employs a variety of fixed effects models to account for omitted variables that may be related to maternal employment and adolescent self-care. Findings suggest that the adolescents of mothers who work full-time spend an additional 43 minutes per week in self-care compared to the adolescents of mothers who work part-time. Further, a standard deviation increase in the number of weeks a mother works during the year increases the probability that her child will be unsupervised by 27 percent. These effects are not constant across socio-economic groups: affluent families have strong effects, while the relationship is more tenuous among low-income families. This finding has important implications for pro-work social welfare policies in the United States.

## Introduction

In the spring of 1997, over 4.7 million children aged 12 to 14 (nearly 42 percent) spent an average of nine hours per week in self-care, i.e., without supervision from their parents or any other adult (Smith 2002).<sup>1</sup> Although it is a natural part of the maturation process for parents to leave their children in self-care eventually, it is not without costs, particularly for those under age 15. Self-care increases the likelihood that adolescents use illegal substances (Aizer forthcoming; Cohen et al. 2002; Richardson et al. 1993), skip school, steal, or harm someone (Aizer forthcoming). “Latchkey kids,” as they are often called, also have higher rates of sexual intercourse and among males, STD infection rates (Cohen et al 2002). Others have noted a relationship between unsupervised time and depression and poor academic performance (Richardson et al. 1993).

Researchers who investigate the consequences of adolescent self-care frequently claim that maternal employment produces self-care and, accordingly, can be linked to these harmful consequences (e.g., Aizer forthcoming; Cohen et al. 2002). Several sources provide descriptive evidence of the link between maternal employment and adolescent self-care. For example, Smith (2002) shows that 11.5 percent of children aged five to 14 with unemployed mothers spent some time in self-care in the spring of 1997. In comparison, 18.9 percent of children with mothers who worked part-time and 24.3 percent of children with mothers who worked full-time were in self-care. Others point to the rise in the labor force participation rates of mothers and the simultaneous rise in self-care over time as evidence of a causal relationship (Cain and Hofferth 1989).<sup>2</sup>

Although the descriptive statistics strongly suggest that maternal employment and self-care are related, the evidence is far from conclusive. Simply comparing the proportion of children in self-care by the employment status of the mother does not take into consideration the

many “lurking” variables that are correlated to maternal employment and adolescent self-care, which could lead to erroneous conclusions. For example, the rise in single motherhood through divorce could just as easily explain the increase in adolescent self-care and labor force participation rates (Cain and Hofferth 1989; Smith 2002). One of the few papers that investigates the impact of maternal employment on self-care, and certainly the most sophisticated analysis, Cain and Hofferth (1989), suggests that neither employment generally nor the time a mother is employed has a statistically distinguishable relationship with adolescent self-care once other factors, such as the age of the child, the number of adults in the household, and the decision to use nonparental care are controlled.

Thus, the evidence is mixed regarding the effect of maternal employment on the time that adolescents spend in self-care calling into question the linkage between maternal employment and bad adolescent outcomes. The aim of this paper is to use the National Education Longitudinal Survey of 1988 (NELS) supplemented by the National Longitudinal Survey of Youth – 1979 cohort (NLSY) to estimate the relationship between maternal employment and the likelihood of adolescent self-care.

Unlike prior research, I use a variety of models to account for some of the omitted variables that may be related to maternal employment and adolescent self-care. I find that the adolescents of mothers who work full-time spend an additional 43 minutes per week in self-care compared to the adolescents of mothers who work part-time. Further, a standard deviation increase in the number of weeks a mother works during the year increases the probability that her child will be unsupervised by 27 percent. More comprehensive analyses show that the relationship between maternal employment and adolescent self-care depends on the socio-economic status of the family with more affluent families having strong effects, while the relationship is more tenuous among low-income families.

This paper proceeds as follows: I, first, explain the factors that are theoretically linked to adolescent self-care conditional on maternal employment followed by a section in which I review the empirical literature on this topic. In the next section, I describe the data I use in this analysis. In the subsequent section I detail my empirical strategy and then report my findings. In the penultimate section I discuss these results. I conclude and discuss the policy implications for pro-work social policies in the final section.

## **Theoretical Underpinnings of Self-Care**

In addition to the fundamental argument that when mothers work they need childcare, self-care being one option, the decision to use self-care is a function of many other factors. Self-care does not necessarily reflect a low quality after-school alternative, and parents may feel quite comfortable allowing children to self care if they believe their children are independent and responsible (Cain and Hofferth 1989). In fact, self-care is a normal stage in the maturation process.

The cost of childcare in the area is also relevant to the decision to use self-care. In neighborhoods with few alternatives above the mother's quality reservation level, after-school care may be quite expensive (Casper and Smith 2002). All else equal, as the price of after-school care increases, one should expect the probability of self-care to increase.<sup>3</sup> In contrast, parents who reside in unsafe neighborhoods pay a higher expected cost of self-care than those parents who reside in safer neighborhoods if their children are more susceptible to harm. This additional expected cost should encourage parents to avoid self-care, all else equal (Cain and Hofferth 1989; Casper and Smith 2002). Relatedly, family resources likely play an important role in parental after-school decisions. Those families with the greatest resources, holding costs

constant, are more likely to use outlets other than self-care for their children (Casper and Smith 2002).

Family structure may also affect the after-school care alternatives available to a working mother. Of course, a co-resident father serves as a potential childcare provider available when a mother works. In addition, married couples have higher incomes on average than single mothers, which as explained above, potentially provides financial resources to purchase after-school activities, such as music lessons or sports. Since employed single mothers have less income and since purchasing after-school activities reduces their net wage rate, these mothers sometimes turn to self-care (Presser 1989). Closely related, adults other than the parents who co-reside in the household might also influence the likelihood of self-care, particularly if the co-resident adults do not work. For instance, DeLeire and Kalil (2002) find that co-resident family members deter adolescent risky behavior, including age of sexual debut, especially for never-married mothers, presumably due to the increase in adult supervision.

Finally, Cain and Hofferth (1989) argue that parental preferences are important to consider. For instance, parents that value independence and responsibility in their children may be more likely to leave them unattended. They also write that parents may have views on self-care that differ by the sex of their child.

## **Prior Research**

In addition to the descriptive reports mentioned above, there are a couple of empirical papers that have tried to estimate the impact of maternal employment on adolescent self-care. Rodman and Pratto (1987) used voluntary response data from a magazine targeting working women and bivariate correlations and found strong associations between self-care and the child's age and self-care and the mother's average weekly work hours. Of course, these models do not control for other factors and the potential for omitted variable bias is quite high.

As the authors understand, the atypical survey collection probably prevents generalizing these results to the population of working mothers in the U.S. as well. As mentioned above, the data were gathered from voluntary responses to a request in a magazine that targets working women asking mothers if they ever leave their child in self-care. Working women who read this magazine are probably different from working women who do not in many ways for which the authors do not control. If true, then their estimates of the impact of maternal employment are likely biased. Further, there is stigma attached to leaving one's children unattended. Thus, women who place their adolescents in self-care may be less likely to respond to the survey creating the potential for nonresponse bias. It is also important to note that children under the age of seven were included in the data. Parents who place their very young children in self-care are probably different from parents who place their adolescents in self-care making their results less relevant to this study.

Cain and Hofferth (1989) used the December 1984 Current Population Survey to investigate the relationship between several factors and self-care among children. They assume a two-step process. First, they estimate the probability of using non-parental care. Next, among the women who used nonparental care, they estimate the impact of several factors on the probability of self-care. They find that race, the child's age, and the number of children in the home are positively related to self-care. In contrast to the theoretical arguments, these authors also find that income is positively related to adolescent self-care. They conclude that the urbanicity of the location of the household and the number of adults in the home are negatively related to self-care as well. Interestingly, however, their results suggest that, conditional on the decision to use nonparental care, hours of maternal employment are *not* related to self-care nor is employment generally.

As was the case with Rodman and Pratto (1987), Cain and Hofferth included children as young as five in their analytical sample, which makes their results less relevant for this study. Further, they used cross-sectional data omitting factors, such as the local cost-of-living as well as neighborhood safety, which could bias their estimates of the impact of maternal employment.

Although not testing the impact of maternal employment directly, Casper and Smith (2002) used the ninth wave of the 1993 SIPP (which was collected in the fall of 1995) and a sample of families with children aged five to 13 to investigate the association between several factors and self-care among adolescents of various ages. They find that African American and Hispanic parents are less likely to leave their children in self-care compared to a residual group that did not include white children. Interestingly, they found no support for the importance of neighborhood safety among children between the ages of 11 and 13 nor did they find a statistically distinguishable link between parental education, their proxy for socioeconomic status, and self-care for adolescents this age.

This paper improves upon the extant literature in several ways. First, I attempt to determine if maternal employment impacts adolescent self-care providing point-estimates on both the time an individual spends at home alone, which heretofore has not been estimated, as well as on the probability of self-care. Second, unlike previous work, I use school and individual fixed effects models to remove the potential bias cause by omitted variables that are constant within the unit of analysis. Finally, I investigate differential effects of maternal employment by the socioeconomic status of the family, which, until now, has not been addressed either.

## **Data**

**NELS.** The National Education Longitudinal Survey of 1988 (NELS) is a Department of Education dataset that includes a sample of eighth graders in 1988 that attended a random sample

of 1,000 schools in the United States.<sup>4</sup> I used the sample of eighth graders that had complete data on time unsupervised after school, maternal employment measures, presence of grandparents, as well as the other covariates necessary for this analysis. These selection criteria left me with a sample of 12,170 young men and women.

In 1988 each eighth grader was asked, “On average, how much time do you spend after school each day at home with no adult present?” Responses were reported in five categories: zero hours, less than one hour, one to two hours, two to three hours, and more than three hours. I transformed these responses into minutes corresponding to the mid-point of each category assigning 30 minutes for less than an hour and 210 minutes for more than three hours.<sup>5</sup>

The NELS also interviewed an adult in each eighth grader’s household in 1988. In 78.3 percent of cases that adult was the respondent’s mother. In most cases when the mother was not interviewed, I obtained her employment information from the adult respondent who was also asked information about his or her partner. These questions provided data on another 14.9 percent of mothers. Thus, I obtained information on the employment of the mother for over 93 percent of the sample. The only distinction between the employment information provided by the mother herself and her partner (when she was not interviewed) is that the data provided by the mother was based on her work in the past four weeks, while information obtained from the partner was based on her work in the past week. Potential responses to both employment questions were the same: no; yes, part-time; yes, full-time; and have a job, but not working.<sup>6</sup> I created indicator variables for each of these responses. Complete descriptive statistics are included in Table 1.

**NLSY.** The NELS is the primary data source for this analysis, but, as explained below, it is not without flaws. To supplement the NELS analysis, I also use the National Longitudinal Survey of Youth – 1979 cohort (NLSY) and the Young Adult Supplement to the NLSY. The

NLSY cohort is composed of 12,686 men and women who were 14 to 21 by the end of 1978. Respondents were interviewed every year beginning in 1979 through 1994, in 1996, 1998, and 2000.

In addition, beginning in 1986 and every other year thereafter, information on the children of the original cohort females was collected. Questions about self-care started in 1988 and were asked every other year until 1998. Unfortunately, after 1994, the NLSY began to skip a year before conducting their surveys of the original cohort. Further, the work questions for the original cohort were asked for the previous year while the self-care questions for adolescents were asked for the current year. Thus, after 1992, I am unable to link up work information with adult supervision information. The data for this analysis, therefore, are restricted to children between the ages of ten and 15 in 1988, 1990, and 1992. These selection criteria left me with a sample of 908 different adolescents or 1,986 observations once multiple observations for the same individual were included.

The outcome in the NLSY is different from the outcome in the NELS. Instead of asking how much time each respondent spends at home alone after school, the NLSY simply asks “If you go home after school is [an] adult present?” Respondents have the option of answering yes, no, or that they go somewhere else. The employment questions are different as well. Each year the respondents in the NLSY reported how many weeks during the year they worked. Compared to the NELS measures, which describe the intensity of work, this employment variable provides less information. Thus, the analyses using the NELS will measure the impact of hours employed on the time unsupervised, while the analyses using the NLSY will measure the impact of the number of weeks worked during a year on the probability of adolescent self-care. Table 2 contains descriptive statistics for the NLSY sample.

## Empirical Strategy

With the NELS data, I estimate the following model of the relationship between maternal employment and time unsupervised for adolescent  $i$  using OLS:

$$Y_i = \beta_0 + \beta_1' \mathbf{E}_i + \beta_2' \mathbf{X}_i + \varepsilon_i, (1)$$

where  $Y$  is the time unsupervised after school;  $\mathbf{E}$  is a vector containing indicators for maternal employment: full-time, part-time, and not working but employed (the omitted category is mother unemployed);<sup>7</sup> and  $\mathbf{X}$  is a vector of covariates.

The vector  $\mathbf{X}$  includes a variety of factors that may be correlated to maternal employment and time unsupervised. Cain and Hofferth (1989) found that non-white children were less likely to self-care. Since the NELS includes a much richer set of race and ethnicity variables I control for African American, Hispanic, Asian/Pacific Islander, and Native American. Also, since age has been shown to be positively associated with self-care (Cain and Hofferth 1989; Kerrebrock and Lewit 1999; Rodman and Pratto 1987; Smith 2002), I control for the age of the respondent in months. To capture any non-linearities in the relationship I also include a quadratic in age. To account for parental preferences for self-care by the sex of the child, I also include an indicator for female. To tap any “traditional” family values which may be correlated to maternal employment and self-care, I include an indicator for Catholic, Baptist, and an indicator if the adolescent reported that he/she was very religious. Parents may be more inclined to let adolescents who are responsible, mature, or independent self-care. They may also be more likely to work. To capture some of these traits I use performance in school measured by eighth grade grade point average. I also use a measure of the adolescent’s ability, the composite score from a standardized reading and math test. In addition, I use indicator variables for mother’s education. Cain and Hofferth (1989) claim that maternal education, in addition to other things, should proxy

for the extent to which parents take precautions when allowing their children to self-care. Since marital status may have some impact on the likelihood of self-care and maternal employment I include indicators for family structure in 1988: “Parents Divorced,” “Parents Separated,” “Parents Widowed,” “Parents Never Married,” and “Parents Cohabiting” (“Parents Married” is the omitted category). Finally, I control for the presence of the grandparents in the house to account for other adults who may provide supervision as well as impact the probability of maternal employment (Hao and Brinton 1997).

Although the NELS contains a rich set of covariates, there are many potentially omitted variables identified in the literature such as the cost of alternative after-school programs in the area or the safety of the neighborhood that may be correlated to both maternal employment and the probability of self-care. Without controls for them, their effects will load onto the maternal employment measures.

To account for these factors I use three different approaches. The first is to compare the difference in the effect of maternal employment on adolescent time unsupervised for those mothers who work full-time compared to the effect for those mothers who work part-time. If omitted factors are biasing all employment coefficients to the same extent, the difference in the effect of maternal employment for those who work full-time and those who work part-time should give some indication of the magnitude of the impact of employment.

In addition to comparing the coefficients between full-time and part-time employment, I also use a school-fixed effects model. A model that uses variation between the school districts to estimate the relationship between maternal employment and self-care could lead to erroneous conclusions. For example, if mothers who work are less likely to live in unsafe neighborhoods and therefore more likely to leave their children in self-care, one is likely to estimate a positive effect for maternal employment. To attribute this effect to maternal employment rather than the

safety of the neighborhood would be incorrect, however. The school fixed effects model, therefore, may provide more solid evidence than the OLS model because characteristics common to the community, including those correlated to maternal employment, are removed from the analysis even when they are not observed.

Although beneficial, this school fixed effects model is far from perfect. The effect of maternal employment is identified based on differences in the relationship between maternal employment and self-care within the same school. It is still certainly possible that maternal employment is correlated with unobserved characteristics of individuals within schools. For instance, suppose mothers who work have children who are more responsible. If this characteristic is unrelated to the school one attends, the school fixed effects model will not remove the bias from this omitted variable. Therefore, in this school fixed effects model, the effect of maternal employment is appropriately identified only to the degree that maternal employment within a school is exogenous to the parent's decision to use adolescent self-care. Taking the difference between full-time and part-time employment should reduce the potential bias, but may not completely remove it.

My final tactic, therefore, is to use variation within the individual. To do this, I must move to the NLSY. As explained above, this changes the question somewhat: instead of investigating the impact of maternal employment on time unsupervised, I am measuring the impact of weeks worked on the probability an adolescent was unsupervised after school. Despite the differences, if the results using this data and an individual fixed effects model (described below) are similar to those found using the NELS, one should be less concerned about the bias caused by factors that are constant within individuals that are uncontrolled in the NELS results.

To remove the individual fixed effects I use the following fixed effects probability model:

$$\text{Prob}(Y_{it} = 1) = \gamma_0 + \gamma_1 W_{it} + \gamma_2' \mathbf{Z}_{it} + \gamma_3' \mathbf{T}_t + \eta_i + v_{it}, \quad (2)$$

where  $Y$  is an indicator for self-care,  $W$  is the number of weeks worked during the year,  $\mathbf{Z}$  is a vector of covariates, and  $\mathbf{T}$  is a vector of year indicator variables. The vector  $Z$  contains a continuous measure of age, an indicator for female, indicators for African American and Hispanic, an indicator for Catholic, an indicator equal to one if the mother attended religious services more than twice a month, the mother's highest grade of school completed, the mother's AFQT score, the local unemployment rate, an indicator if the mother is married, the number of adults in the mother's household<sup>8</sup>, and regional indicators.

I will use both a fixed effects linear probability model (FE LPM) and a fixed effects logit model (FE logit) to remove the individual fixed effects,  $\eta$ . I report results from a logit and linear probability model (LPM) for comparison purposes.

Even the NSLY data and individual fixed effects models do not resolve all of the problems mentioned above. Optimally, one would want a panel with the number of hours the mother worked each month and the amount of time the child spent unsupervised. One could then remove the individual fixed effect and estimate the impact of hours of work on time unsupervised using within individual variation. To the best of my knowledge, data of this type does not exist. The NLSY data, although longitudinal, does not indicate the amount of time unsupervised, only whether the child was unsupervised. Thus, the information on adolescent self-care is not as detailed and can only indicate if work increases the probability of self-care rather than how much time the adolescent spent unsupervised.

The second problem with this data is more important. As explained above, the maternal employment measure in the NLSY is not a measure of intensity of work as was the case with the NELS. Rather it measures the number of weeks worked during the year. Mothers may work 40 hours per week when working or as little as 1 hour. The data in the NLSY do not make this

distinction. Thus, both the outcome and the independent variable of interest contain less information than the NELS data and these results should be considered conservative estimates of the impact of maternal employment.

The individual fixed effects model also has flaws one must consider. Factors that change over time within individuals are not removed in this model and might continue to bias the results. If, for instance, independence conditional on age changes over time and is correlated to both the weeks the mother worked and the likelihood that the adolescent was unsupervised, then removing the individual fixed effect will not prevent omitted variable bias.

### **Differential Effects by Socioeconomic Status**

None of the models described above contain controls for income despite the results in Cain and Hofferth (1989) which show a positive relationship between income and the probability of self-care. I omitted this measure because one mechanism through which maternal employment could impact self-care is family income, i.e., mothers who work may have more resources to purchase other after-school options, all else equal. Including income would, therefore, overcontrol for the maternal employment measure.

After establishing the link between maternal employment and adolescent self-care, I next return to the NELS and estimate models that include income. To determine if income is the mechanism through which maternal employment operates, I include a measure for the family's income in 1987 to the specification described in equation 1. I also include interactions between income and the maternal employment indicator variables to investigate differential effects by income group. These models strongly indicate a difference in the impact of maternal employment by income status.

To expand on these results, I break the full NELS sample into several sub-samples defined by a measure of economic status. First, I divide the families into those that earned less

than \$10,000 in 1987, those that earned between \$10,000 and \$24,999, those families that earned between \$25,000 and \$49,999, and those that earned \$50,000 or more. I then estimate the impact of maternal employment within each group.

Second, I estimate the impact of maternal employment based on the socioeconomic status of the school the respondent attended, proxied by the proportion of students within the school that received a free or reduced price lunch in 1988. Optimally, I would want an indication of socioeconomic status that is independent of maternal employment. Although not perfect, dividing the sample by the socioeconomic status of those within the same school should not distort the maternal employment effect as much as dividing by the income measure. Thus, I prefer this approach.

For each student, the NELS indicates whether 0, 1-10, 11-20, 21-30, 31-50, 51-75, or 76-100 percent of the students in his or her school received either a free or a reduced-price lunch. To produce roughly equivalent sample sizes, I divide the sample into those who attended schools with 0, 1-10, 11-30, and 31-100 percent of schoolmates receiving a free or reduced-price lunch.

Finally, because family income could be correlated to individual adolescent characteristics such as maturity and responsibility, I return to the NLSY and test for differences by socioeconomic status. Since the NLSY has far fewer cases, and as explained below, those in the NLSY are disproportionately low-income, I do not break the data into as many categories. Instead, using family income in 1987, I divide the data into three groups: those who were classified as poor, those who were not poor in 1987 but had income less than or equal to \$39,145 and those who were not poor in 1987 but had income greater than \$39,145.<sup>9</sup>

## Results

I report the NELS results in Table 3. The first column contains the estimates using OLS. Mothers who work full-time have adolescents who spend nearly 21 more minutes per day in self-care than the children of mothers who are not working, and this result is statistically significant at the 1 percent level. In comparison, mothers who work part-time have eighth graders who spend just over 12 minutes more in self-care on average per day than the children of mothers who are not working. The difference between full-time and part-time workers, 8.6 minutes, is also statistically significant at the 1 percent level. The difference in the estimates suggests that moving from full-time work to part-time work reduces the time that adolescents spend in self-care by 43 minutes per week.<sup>10</sup>

The second column of Table 3 reports results from the school fixed effects model (SFE). Point estimates for the employment coefficients are very similar in this model. Mothers who work full-time have adolescents who spend an average of 20.3 more minutes unsupervised compared to the children of mothers who are not working. Mothers who work part-time have adolescents who spend an average of 11.8 more minutes unsupervised compared to the adolescents of mothers who are not working. The difference is 8.4 minutes. All estimates are statistically significant at the 0.01 level.

In both models it is difficult to interpret the coefficient on the “Mother Employed, Not Working” variable. If these mothers are not currently working, one might expect the time their children are unsupervised to be no different from mothers who report that they are not working. The fact that the coefficient for the variable is positive and statistically significant shows this not to be the case. One possible explanation for this coefficient is that the children are reporting time

unsupervised based on periods when their mother was working, while the mothers in this category are reporting current information.

These results suggest that African American and Asian/Pacific Islander adolescents do not spend more time unsupervised than white adolescents. Results from the OLS model suggest that Hispanic adolescents are less likely to spend time in self-care than white adolescents, but once the school fixed effect is removed from the error term, this difference is statistically insignificant. Both the OLS and FE results suggest that Native American adolescents are likely to spend about 8 minutes per day more in self-care than white adolescents.

The findings are consistent with the rest of the literature showing a positive relationship between age and time unsupervised. Also, as was the case for Cain and Hofferth (1989), I do not find an average difference in time unsupervised by the sex of the adolescent. These results are similar to Cain and Hofferth as well in that the presence of a grandparent reduces the time unsupervised by nearly 20 minutes per day compared to adolescents without a grandparent in the home.

Religious affiliation does not appear to affect time unsupervised, but religiosity does. Adolescents who attend religious services more than twice a month spend between five and six less minutes unsupervised after-school daily compared to those who attend fewer services.

The higher the adolescent's grade point average, the less time the adolescent spends at home alone. Similarly, the higher their scores on the standardized test, the less time they spend at home alone. If this measure were only taping the responsibility, maturity, or independence of the individual, one would expect this coefficient to be positive. However, it is likely that students who perform well in school and on tests may be more active in after-school activities or more likely to spend time at the library after school all of which would produce a negative coefficient. Once the academic performance of the student is controlled, the educational attainment of the

mother is statistically unrelated to time unsupervised, with the exception of the “Mother Has Completed Less Than High School” measure in the OLS model.

The variables measuring the marital status of the mother show the importance of family structure. Compared to children of mothers who are married, mothers who are divorced have adolescents who are spending 19 to 20 minutes more per day unsupervised. Mothers who are separated have adolescents who spend approximately ten minutes more per day unsupervised, and widowed mothers have adolescents who spend about 17 minutes more per day unsupervised. Interestingly, the children of mothers who have never been married do not spend any more time unsupervised each day compared to the children of married mothers. The children of cohabiting mothers spend about nine to ten minutes more per day unsupervised compared to the children of married mothers, but this difference is only significant in the OLS model.

Factors that vary within schools but that are constant within individuals, such as an individual’s responsibility or maturity level, are potential sources of concern even using the school fixed effects model. In Table 4, I report results using individual fixed effects models and the NLSY data. The results from the fixed effects logit and the fixed effects LPM are very similar. Both suggest a positive relationship between the number of weeks the mother worked and the probability that her adolescent child spent some time unsupervised. The results from the FE LPM suggest that if a mother increased her number of weeks worked by a standard deviation (22.5 weeks), her adolescent will be 6.8 percentage points (27 percent) more likely to spend some time unsupervised. Consistent with the NELS results and previous research both models suggest a positive relationship between age and the probability of being unsupervised. The FE LPM suggests that for each year of age, the adolescent is 1.5 percentage points more likely to be unsupervised. Similar to the NELS results, the NLSY findings also suggest that maternal education is unrelated to the self-care. Although the parent’s marital status is negatively related

to the probability of self-care, as was the case with the NELS, the difference is statistically insignificant. The local unemployment rate does not appear to be related to the probability of adolescent self-care nor does the number of adults, once fixed effects are removed.

The first two columns of Table 5 display estimates of the model in equation 1 using the NELS except I include family income as an additional covariate. In the OLS and SFE models, the difference between the full-time coefficient and the part-time coefficient remain statistically significant and nearly the same: between 8.2 and 8.6 minutes. The point estimate for the income measure is positive and insignificant in the OLS model and positive and significant in the SFE model. In the third and fourth columns, I include an interaction between maternal work and family income. Interestingly, the difference between the coefficient for full-time work and part-time work is no longer statistically significant. Further, the interaction between family income and full-time work is statistically significant suggesting that the marginal effect of maternal employment is larger for those at higher income levels compared to those at lower income levels. Estimating the importance of income in these models is not straightforward given the direct effects of both variables and the interaction of both variables with income. To simplify the interpretation, I move to sub-samples of the NELS dividing the full sample by family income and the relative affluence of the school.

In Table 6, I use categories based on the family's 1987 income. The top panel shows that mothers who earned less than \$10,000 and work full-time have children who spend almost 13 more minutes per day unsupervised than the children of women who are not working. Among mothers who work part-time, their children spend 21 more minutes on average unsupervised compared to the children of mothers who are not working. Interestingly, the difference in the point-estimates for mothers who work full-time and mothers who work part-time is not statistically different from zero suggesting no strong effect of maternal employment among low-

income families (see the third row). The same is true once the school-fixed effects model is employed (see lower panel). The difference for mothers with family incomes between \$10,000 and \$24,999 is marginally significant with the children of mothers who work full-time spending about 6 minutes more unsupervised each day. As one compares the effects in higher income groups (moves to the right in this table), the impact of maternal employment becomes larger. Among those who earn between \$25,000 and \$49,999, the difference is between 7 and 8 minutes depending on the model (either OLS or SFE), and among those who earn \$50,000 or more, the impact is more than 12 minutes.

Table 7 shows that among the lowest SES group (31 to 100 percent receiving a free or reduced price lunch), there is no statistically distinguishable difference in time unsupervised by maternal employment. Moving to the left, among those adolescents who attended schools with 11 to 30 percent of the student population receiving a free or reduced price lunch, those with mothers who worked full-time spent approximately 8 minutes more unsupervised per day compared to those with mothers who worked part-time. The difference is a little larger than 11 minutes for those who attended schools in which between 1 and 10 percent of the student population received a free or reduced price lunch. Among those who attended schools in which no one is received a lunch subsidy, the wealthiest schools, the difference is around 16 minutes. Collectively, these results suggest that the impact of maternal employment is stronger among the relatively affluent compared to the relatively low-income.

Table 8 shows results modeling the impact of the number of weeks on the probability of spending some time unsupervised using the NLSY. A couple of findings are noteworthy. First, unlike the results from the NELS, maternal work hours do seem to matter for those who are low-income. The point estimates for the FE LPM suggest that a standard deviation increase in maternal work hours increases the probability of self-care by 6 percentage points among this

group. Second, the impact of maternal employment is larger for those who are not low-income, but only for those in the middle tier. The point estimates are actually insignificant for the most affluent group. For families in the middle income tier, a standard deviation increase in maternal work increases the probability of self-care by 9 percentage points. Of course, one should keep in mind that these results are based on very small samples over a short time period and that the measures in the NLSY are particularly blunt. It is also a non-trivial problem that the NLSY sample has missing data on 153 adolescents (427 person-year observations).

## **Discussion**

Before concluding, there are several issues worthy of attention. In this discussion section I report on the consistency between adolescents' reports of time unsupervised and parental reports of adolescent self-care. Next, I describe a well-documented caveat concerning the generalizability of results using the NLYS – Young Adult dataset. Finally, I call attention to what these results say and, perhaps more importantly, what they do not say.

The results from the NELS are based on eighth graders' reports of their time unsupervised. If adolescents' reports are systematically biased, then these results might be misleading. For instance, there may be a positive association between the time a child spends at home alone and the inflation in the report of the time the child spends at home alone.

The NELS did not ask parents how much time their children spent at home alone, but it did ask parents if there was ever a time when their children were at home alone after school. Potential responses were never (coded 1), rarely (coded 2), sometimes (coded 3), and usually (coded 4). I used an ordered probit model to estimate the relationship between maternal employment and the probability that the children of the mother spent some time at home alone. Coefficient estimates from the full-time employment and the part-time employment measures are

reported in Table 9. Both coefficient estimates are statistically significant at the 0.01 level as is the difference between them. Given the consistency between these results and those reported by the adolescents, measurement error in the adolescent's reports is not likely a problem.

It is commonly noted that using data on the children of the NLSY cohort may limit the generalizability of the results (see, for example, Aizer forthcoming and Mott et al. 1996). Recall that the children of the original NLSY cohort had to be at least ten years old by 1990. Since their mothers were between the ages of 14 and 21 in 1978, these children are disproportionately likely to have young mothers. One can see this evidence in Table 2 where the average age of the mother when she had her child was 18.3 years. Further, these women had low education levels, less than a high school education on average, and they did not perform well on the AFQT as a group. Given the low education levels, AFQT scores, and young age, it is highly probable that these were low-income women, which makes the NLSY results less generalizable than the NELS results. Nevertheless, if the results from the NELS suggesting small effects among low-income families are correct, then using this NLSY sample may tend to underestimate the impact between maternal employment and the probability of self-care.

Finally, it is important to emphasize what these results say as much as what they do not say. I find differential effects of maternal employment by the socioeconomic status of the family: maternal employment among relatively affluent families increases the time adolescent children are unsupervised, while maternal employment among relatively low-income families seems to have a smaller impact or none at all. This does not imply that the adolescents in these low-income families are never unsupervised. It only demonstrates that maternal employment does not alter the time they are unsupervised.

## Conclusions and Policy Implications

I used the NELS, OLS, and a school fixed effects model to estimate the impact of maternal employment on the time that adolescents spend unsupervised. These results suggest that the adolescents of mothers who work full-time spend about 43 minutes more per week in self-care than the children of mothers who work part-time. In addition, I used the NLSY and fixed effects probability models to estimate the change in the probability of self-care given a change in the number of weeks a mother worked during the year. Results from these analyses suggest that a standard deviation change in the number of weeks worked increases the probability that an adolescent is unsupervised by about 27 percent. Results from both models support the claims frequently made, but rarely tested, that maternal employment leads to adolescent self-care.

This finding was not consistent across socioeconomic groups, however. Maternal employment appears to impact relatively affluent families much more than relatively low-income families. Among families that attend relatively wealthy schools in the NELS, an increase in maternal employment from part-time to full-time increased the time the adolescents were unsupervised by about 80 minutes per week. Among low-income families in the NELS, there was not a statistically distinguishable difference in the amount of time adolescents were unsupervised when mothers increased their work hours, although results using the NLSY suggests that there may be a weak positive relationship.

If the NELS results for low-income families are correct, which, again, is far from certain given the NLSY findings, they have important policy implications in the United States. Many social welfare policies targeting low-income families have placed self-sufficiency through work as a major objective of the program. For example, the Temporary Assistance for Needy Families (TANF) program has a work-requirement for mothers who receive assistance as well as a time

limit, which will ultimately force many mothers into the labor force. Similarly, the Earned Income Tax Credit (EITC) and the Child Care and Development Fund (CCDF), a childcare subsidy program for low-income families, are, at heart, pro-work social programs. Results from this paper suggest that increasing work among low-income mothers may not increase the time that their children spend unsupervised any more than was the case prior to employment. For those interested in promoting self-sufficiency through work but who also desire to avoid latch-key children among low-income families, these results suggest that both goals are possible. Of course, more research is necessary before concluding with certainty that maternal employment does not impact the time low-income adolescents spend at home alone.

## Endnotes

\*Author, Assistant Professor of Public Administration, Maxwell School of Citizenship and Public Affairs, Syracuse University. I am grateful to Arthur Brooks for comments on an earlier version of this paper.

1. Measuring self-care is quite complicated and varies by age and definition. See Kerrebrock and Lewit (1999) for a summary of the difficulties.
2. Researchers frequently distinguish between the total time a mother spends at home and the time she invests directly in her children. For example, mothers today seem to spend less time at home than in the past, but the time invested in their children while at home may not have changed (Bianchi 2000). The arguments in this paper are probably more appropriately based on the total amount of time that mothers are at home with their children since even the time mothers spend in housework, for instance, probably reduces the likelihood that their children will engage in risky behaviors.
3. Although self-care has no monetary cost, it is not free. Mothers who have adolescents in self-care might suffer from additional worry and unexpected trips home to handle emergencies.
4. The initial sample was selected to represent eighth graders not enrolled in special education, Bureau of Indian Affairs Schools, in some varieties of vocational schools, and in schools designed for dependents of U.S. citizens overseas.
5. For each category except the lowest and the highest, the measurement error is likely to be random thereby biasing the coefficient downwards. Obviously, the first category, zero, should not contain much measurement error. However, as explained above, those who reported more than three hours of unsupervised time were top-coded at three hours in the NELS, and I assigned them 210 minutes for the analyses. As shown below in Table 1, the average time unsupervised for eighth graders was approximately 80 minutes per day or 6 hours and 40 minutes per week. Smith (2002) reports that the average time unsupervised for 5- to 11-year-olds was 6 hours per week and for 12- to 14-year-olds was 9 hours per week. Given that most of the eighth graders in the spring of 1988 were 13 and 14, these statistics suggest that if the relationship between maternal employment and unsupervised time is positive, the downward bias in the estimated effect of maternal employment caused by these observations may be especially acute. Hence, point estimates of the effect of maternal employment presented below should be considered the lower bound estimates of the impact of maternal employment.
6. The NELS does not provide definitions of full-time and part-time work.
7. Those who report that they are employed but not working in the last four weeks (or in the last week for those whose employment information was based on the report from her partner), may have been on vacation, disabled, on maternity leave, or any of a variety of

other factors. Some of them are probably full-time workers while others are part-time workers. I control for this unusual group to net out their impact and focus primarily on those who report being full-time workers or part-time workers.

8. Since this factor was important in the literature and in the NELS results, I imputed values for missing cases of adults to minimize the loss of precision in the maternal employment coefficients due to complete case deletion. I used OLS and the other covariates to impute 86 (4.3 percent) missing values.
9. \$39,145 is the median family income of those who were not poor in 1987.
10. These results are based on answers provided during the spring of 1988, i.e., during the school year. One might argue that since children do not have school during the summer, their time unsupervised might increase. On the other hand, mothers who are teachers or work within the school system might not work at all during the summer which might decrease the average time unsupervised. Thus, these results may only apply to time unsupervised during the school year.

## References

- Aizer, Anna. forthcoming. "Home Alone: Supervision After School and Child Behavior." *Journal of Public Economics*
- Bianchi, Suzanne M. 2000. "Maternal Employment and Time with Children: Dramatic Change or Surprising Continuity?" *Demography* 37 (4) (November): 401-414.
- Cain, Virginia S., and Sandra L. Hofferth. 1989. "Parental Choice of Self-Care for School-Age Children." *Journal of Marriage and the Family* 51 (1) (February): 65-77.
- Casper, Lynne M., and Kristen E. Smith. 2002. "Dispelling the Myths: Self-Care, Class, and Race." *Journal of Family Issues* 23 (6): 716-727.
- Cohen, Deborah A., Thomas A. Farley, Stephanie N. Taylor, David H. Martin, and Mark A. Schuster. 2002. "When and Where Do Youths Have Sex? The Potential Role of Adult Supervision." *Pediatrics* 110 (6) (December): 1239.
- DeLeire, Thomas, and Ariel Kalil. 2002. "Good Things Come in Threes: Single-Parent Multigenerational Family Structure and Adolescent Adjustment." *Demography* 39 (2) (May): 393-413.
- Hao, Lingxin, and Mary C. Brinton. 1997. "Productive Activities and Support Systems of Single Mothers." *American Journal of Sociology* 102 (5) (March): 1305-1344.
- Kerrebrock, Nancy, and Eugene M. Lewit. 1999. "CHILD INDICATORS: Children in Self-Care." *The Future of Children: When School Is Out* 9 (2) (Fall): 151-160. [http://www.futureofchildren.org/usr\\_doc/vol9no2Indicators.pdf](http://www.futureofchildren.org/usr_doc/vol9no2Indicators.pdf).
- Mott, Frank L., Michelle M. Fondell, Paul N. Hu, Lori Kowaleski-Jones, and Elizabeth G. Menaghan. 1996. "The Determinants of First Sex by Age 14 in a High-Risk Adolescent Population." *Family Planning Perspectives* 28 (1) (January-February): 13-18.
- Presser, Harriet B. 1989. "Can We Make Time for Children? The Economy, Work Schedules, and Child Care: Population Association of America, 1989 Presidential Address." *Demography* 26 (4) (November): 523-543.
- Rodman, Hyman, and David J. Pratto. 1987. "Child's Age and Mother's Employment in Relation to Greater Use of Self-Care Arrangements for Children." *Journal of Marriage and the Family* 49 (3) (August): 573-578.
- Smith, Kristin. 2002. "Who's Minding the Kids? Child Care Arrangements: Spring 1997." Current Population Reports P70-86. Washington, DC: U. S. Bureau of the Census. July. <http://www.census.gov/prod/2002pubs/p70-86.pdf>.
- U.S.Congress. House Committee on Ways and Means. 2000. *2000 Green Book: Background Material and Data on Programs within the Jurisdiction of the Committee on Ways and Means*. Committee Report WMCP: 106-14. Washington, DC: Government Printing Office. <http://www.gpoaccess.gov/wmprints/search.html>.

<b>Table 1. Descriptive Statistics for the NELS Sample</b>	
<b>Variable</b>	<b>Mean (Standard Deviation)</b>
Average Time After School Unsupervised by an Adult per Day (in minutes)	79.472 (65.904)
Mother Works Full-Time	0.509 (0.500)
Mother Works Part-Time	0.190 (0.392)
Mother Employed, Not Working	0.025 (0.157)
Mother Not Working	0.275 (0.447)
African American	0.081 (0.273)
Hispanic	0.101 (0.302)
Asian/Pacific Islander	0.060 (0.238)
Native American	0.032 (0.178)
Age (in months)	174.252 (5.859)
Female	0.521 (0.500)
Catholic	0.271 (0.445)
Baptist	0.193 (0.394)
Very Religious	0.121 (0.326)
Grandparents Co-reside	0.049 (0.215)
Standardized Test Score	52.751 (10.123)
GPA	3.037 (0.717)
Mother Has Completed Less Than High School	0.131 (0.337)
Mother Has HS Degree	0.340 (0.474)
Mother Has Completed Some College	0.245 (0.430)
Parents Divorced	0.090 (0.286)
Parents Separated	0.026 (0.160)
Parent Widowed	0.017 (0.129)

Parents Never Married	0.017 (0.131)
Parents Cohabiting	0.013 (0.114)
South	0.339 (0.473)
Midwest	0.296 (0.456)
West	0.184 (0.387)
1987 Family Income (in 1000s)	44.222 (38.424) [N=11,728]
N	12,170
Source: Author's calculations.	

<b>Table 2: Descriptive Statistics for the NLSY Sample</b>	
<b>Variable</b>	<b>Mean (Standard Deviation)</b>
Unsupervised	0.246 (0.431)
Annual Weeks Worked	30.916 (22.532)
Adolescent's Age (in years)	13.483 (1.071)
Female	0.498 (0.500)
Mother's Age when She Had Child	18.325 (1.953)
African American	0.456 (0.498)
Hispanic	0.206 (0.405)
Catholic	0.272 (0.445)
Co-resident Adults	1.856 (0.792) [N=883]
Attends Religious Services > Twice per Month	0.405 (0.491)
Mother's Highest Grade Completed	11.254 (2.276)
Mother's AFQT Score (percentile)	25.745 (22.951)
Local Unemployment Rate	7.655 (2.670)
Parents Married	0.533 (0.499)
South	0.479 (0.500)
Midwest	0.235 (0.424)
West	0.176 (0.381)
1987 Family Income	32,237.98 (25,103.53) [N = 755]
N	908
<i>Note:</i> Descriptive statistics for each adolescent. For time varying variables, value reported from last year observed.	
Source: Author's calculations.	

**Table 3: OLS and School Fixed Effects Models of Time After School Unsupervised, NELS**

	<b>OLS</b>	<b>SFE</b>
	20.727**	20.278**
Mother Works Full-Time	(1.399)	(1.477)
	12.115**	11.833**
Mother Works Part-Time	(1.761)	(1.830)
	11.087**	9.184*
Mother Employed, Not Working	(3.834)	(3.972)
	3.797	4.343
African American	(2.418)	(3.011)
	-7.048**	-4.267
Hispanic	(2.186)	(2.693)
	4.682	4.554
Asian/Pacific Islander	(2.565)	(2.874)
	7.798*	7.506*
Native American	(3.327)	(3.504)
	-9.892**	-8.978*
Age (in months)	(3.642)	(3.834)
	0.028**	0.026*
Age Squared (in months)	(0.010)	(0.011)
	1.129	1.536
Female	(1.186)	(1.248)
	-0.726	-1.254
Catholic	(1.423)	(1.636)
	0.142	-0.327
Baptist	(1.686)	(1.850)
	-6.059**	-5.432**
Very Religious	(1.806)	(1.893)
	-19.518**	-19.784**
Grandparents Co-Reside	(2.743)	(2.878)
	-0.428**	-0.393**
Standardized Test Score	(0.076)	(0.085)
	-5.391**	-5.862**
GPA	(1.007)	(1.096)
	-4.673*	-2.812
Mother Has Completed Less Than High School	(2.183)	(2.390)
	-0.630	-0.694
Mother Has HS Degree	(1.580)	(1.736)
	1.026	0.923
Mother Has Completed Some College	(1.648)	(1.761)
Parents Divorced	19.197**	20.402**

	(2.084)	(2.175)
	10.214**	10.190**
Parents Separated	(3.725)	(3.901)
	16.633**	17.375**
Parents Widowed	(4.530)	(4.710)
	6.405	6.704
Parents Never Married	(4.684)	(5.029)
	10.439*	9.201
Parents Cohabiting	(5.159)	(5.358)
	962.561**	875.261**
Constant	(321.332)	(338.376)
Observations	12170	12170
<p><i>Notes:</i> * <math>p &lt; 0.05</math>; ** <math>p &lt; 0.01</math>; standard errors in parentheses; models contain regional indicator variables; difference in full-time employment and part-time employment is significant at the 0.01 level in both models.</p>		
<p>Source: Author's calculations.</p>		

<b>Table 4: Models of Probability Adolescent Unsupervised After School, NLSY</b>				
	<b>Logit</b>	<b>FE Logit</b>	<b>LPM</b>	<b>FE LPM</b>
Number of Weeks Mother Worked During the Year	0.032** (0.003)	0.022** (0.007)	0.005** (0.000)	0.003** (0.001)
Child's Age (in years)	0.146** (0.049)	0.113 (0.059)	0.022** (0.008)	0.015* (0.007)
Female	0.057 (0.114)		0.010 (0.018)	
Mother's Age at Child's Birth	0.074* (0.036)		0.011* (0.006)	
African American	-0.234 (0.166)		-0.035 (0.027)	
Hispanic	0.113 (0.203)		0.020 (0.033)	
Catholic	-0.117 (0.168)		-0.021 (0.028)	
Attends Religious Services > 2 Times per Month	-0.368** (0.123)		-0.055** (0.019)	
Mother's Highest Grade Completed	0.050 (0.033)	0.022 (0.228)	0.007 (0.005)	0.005 (0.035)
AFQT	0.604 (0.335)		0.116* (0.056)	
Local Unemployment Rate	-0.002 (0.024)	0.041 (0.051)	-0.000 (0.004)	0.014 (0.008)
Parents Married	-0.083 (0.146)	-0.207 (0.396)	-0.027 (0.022)	-0.037 (0.052)
Number of Adults in Mother's Household	-0.361** (0.106)	-0.384 (0.207)	-0.041** (0.013)	-0.037 (0.021)
Constant	-5.356** (1.195)		-0.364* (0.181)	-0.126 (0.387)
Observations	1986	594	1986	1986
Notes: * p < 0.05; ** p < 0.01; standard errors in parentheses; models contain regional indicator variables and year indicator variables				
Source: Author's calculations.				

<b>Table 5: OLS and FE Models of Time After School Unsupervised Including 1987 Family Income, NELS</b>				
	<b>OLS</b>	<b>SFE</b>	<b>OLS with Interaction</b>	<b>SFE with Interaction</b>
Mother Works Full-Time	21.316** (1.431)	20.703** (1.509)	16.459** (2.105)	16.385** (2.211)
Mother Works Part-Time	12.756** (1.799)	12.511** (1.871)	13.823** (2.672)	13.555** (2.781)
1987 Family Income	0.031 (0.018)	0.067** (0.022)	-0.001 (0.025)	0.038 (0.028)
1987 Family Income*Mother Works Full-Time			0.112** (0.035)	0.099** (0.036)
1987 Family Income*Mother Works Part-Time			-0.020 (0.042)	-0.020 (0.043)
Mother Employed, Not Working	12.170** (3.931)	9.876* (4.079)	12.113** (3.929)	9.840* (4.078)
African American	4.316 (2.456)	5.339 (3.061)	4.293 (2.455)	5.205 (3.061)
Hispanic	-7.050** (2.226)	-3.836 (2.738)	-7.131** (2.225)	-3.890 (2.737)
Asian/Pacific Islander	4.914 (2.597)	5.267 (2.911)	4.562 (2.598)	4.947 (2.912)
Native American	7.870* (3.359)	7.866* (3.542)	7.867* (3.358)	7.891* (3.541)
Age (in months)	-10.593** (3.723)	-9.364* (3.927)	-10.326** (3.723)	-9.208* (3.926)
Age Squared (in months)	0.030** (0.011)	0.027* (0.011)	0.030** (0.011)	0.027* (0.011)
Female	1.304 (1.209)	1.663 (1.273)	1.307 (1.208)	1.676 (1.273)
Catholic	-0.678 (1.452)	-0.947 (1.673)	-0.602 (1.452)	-0.892 (1.673)
Baptist	0.154 (1.716)	-0.483 (1.879)	0.175 (1.716)	-0.455 (1.879)
Very Religious	-6.652** (1.841)	-5.966** (1.932)	-6.562** (1.840)	-5.897** (1.932)
Grandparents Co-Reside	-18.819** (2.787)	-18.929** (2.926)	-18.656** (2.787)	-18.740** (2.925)
Standardized Test Score	-0.426** (0.079)	-0.373** (0.086)	-0.427** (0.079)	-0.375** (0.086)
GPA	-5.725** (1.026)	-6.350** (1.119)	-5.723** (1.026)	-6.327** (1.119)
Mother Has Completed Less Than High School	-4.007	-2.065	-3.744	-1.771

	(2.314)	(2.474)	(2.314)	(2.475)
Mother Has HS Degree	0.098	-0.042	0.382	0.254
	(1.687)	(1.796)	(1.689)	(1.799)
Mother Has Completed Some College	1.272	0.927	1.576	1.224
	(1.724)	(1.810)	(1.726)	(1.812)
Parents Divored	19.615**	21.481**	20.502**	22.248**
	(2.159)	(2.274)	(2.172)	(2.287)
Parents Separated	10.493**	10.655**	10.799**	10.897**
	(3.780)	(3.960)	(3.779)	(3.959)
Parents Widowed	17.817**	19.101**	17.906**	19.118**
	(4.625)	(4.819)	(4.623)	(4.817)
Parents Never Married	7.243	8.297	7.536	8.594
	(4.732)	(5.084)	(4.730)	(5.084)
Parents Cohabiting	10.560*	9.479	10.395*	9.342
	(5.198)	(5.404)	(5.196)	(5.403)
Constant	1,025.098**	909.312**	1,001.908**	896.078**
	(328.404)	(346.516)	(328.329)	(346.419)
Observations	11728	11728	11728	11728
Notes: * $p < 0.05$ ; ** $p < 0.01$ ; standard errors in parentheses; models contain regional indicator variables; family income was missing for 442 adolescents; the difference in the coefficients for part-time and full-time work was statistically significant in the first two columns, but insignificant in the models with interactions.				
Source: Author's calculations.				

<b>Table 6: Coefficient Estimates of Maternal Employment by Income Group, NELS</b>				
	<b>&lt; \$10,000</b>	<b>\$10,000-\$24,999</b>	<b>\$25,000-\$49,999</b>	<b>\$50,000 or more</b>
<b>OLS</b>				
Mother Works Full-Time	12.681*	18.893**	18.536**	26.989**
	(5.079)	(3.183)	(2.338)	(2.571)
Mother Works Part-Time	21.141**	12.309**	10.445**	14.334**
	(6.868)	(4.130)	(2.835)	(3.080)
<i>Difference in coefficients</i>		+	**	**
Observations	1022	2700	4797	3209
<b>SFE</b>				
Mother Works Full-Time	16.415*	16.839**	18.261**	28.351**
	(7.532)	(3.756)	(2.586)	(2.977)
Mother Works Part-Time	25.304*	11.083*	11.053**	16.196**
	(10.185)	(4.897)	(3.098)	(3.454)
<i>Difference in coefficients</i>			**	**
Observations	1022	2700	4797	3209
Notes: + p < 0.10; * p < 0.05; ** p < 0.01; standard errors in parentheses; family income was missing for 442 adolescents; model contains same covariates as Table 3 models				
Source: Author's calculations.				

<b>Table 7: Coefficient Estimates for Maternal Employment by SES Group, NELS</b>				
	<b>0 %</b>	<b>1-10 %</b>	<b>11-30 %</b>	<b>31-100 %</b>
<b>OLS</b>				
Mother Works Full-Time	23.195**	29.233**	20.046**	12.015**
	(3.329)	(2.786)	(2.517)	(2.871)
Mother Works Part-Time	7.063	18.060**	11.681**	13.403**
	(3.959)	(3.245)	(3.195)	(4.020)
<i>Difference in coefficients</i>	**	**	**	
Observations	1954	3113	3904	3022
<b>SFE</b>				
Mother Works Full-Time	24.024**	28.791**	18.998**	11.604**
	(3.569)	(2.898)	(2.627)	(3.052)
Mother Works Part-Time	8.071	17.459**	11.429**	12.978**
	(4.122)	(3.345)	(3.311)	(4.224)
<i>Difference in coefficients</i>	**	**	**	
Observations	1954	3113	3904	3022
Notes: + p < 0.10; * p < 0.05; ** p < 0.01; standard errors in parentheses; models contains same covariates as Table 3 models; 177 cases had missing information on the number of students in the school receiving free or reduced price lunch.				
Source: Author's calculations.				

<b>Table 7: Coefficient Estimates for Maternal Employment by SES Group, NELS</b>				
	<b>0 %</b>	<b>1-10 %</b>	<b>11-30 %</b>	<b>31-100 %</b>
<b>OLS</b>				
Mother Works Full-Time	23.195**	29.233**	20.046**	12.015**
	(3.329)	(2.786)	(2.517)	(2.871)
Mother Works Part-Time	7.063	18.060**	11.681**	13.403**
	(3.959)	(3.245)	(3.195)	(4.020)
<i>Difference in coefficients</i>	**	**	**	
Observations	1954	3113	3904	3022
<b>SFE</b>				
Mother Works Full-Time	24.024**	28.791**	18.998**	11.604**
	(3.569)	(2.898)	(2.627)	(3.052)
Mother Works Part-Time	8.071	17.459**	11.429**	12.978**
	(4.122)	(3.345)	(3.311)	(4.224)
<i>Difference in coefficients</i>	**	**	**	
Observations	1954	3113	3904	3022
Notes: + p < 0.10; * p < 0.05; ** p < 0.01; standard errors in parentheses; models contains same covariates as Table 3 models; 177 cases had missing information on the number of students in the school receiving free or reduced price lunch.				
Source: Author's calculations.				

	Table 8. Probability Unsupervised after School by Income Group, NLSY					
	Low-Income			Not Low-Income		
	FE Logit	FE LPM		FE Logit	FE LPM	
Number of Weeks Mother Worked during the Year	0.031* (0.013)	0.003* (0.001)		0.059* (0.026)	0.004* (0.002)	
Child's Age (in years)	0.176 (0.125)	0.015 (0.012)		0.121 (0.127)	0.015 (0.015)	
Local Unemployment Rate	-0.109 (0.112)	-0.008 (0.013)		0.050 (0.122)	0.006 (0.015)	
Parents Married	-0.806 (0.935)	-0.030 (0.081)		-0.231 (1.043)	0.002 (0.109)	
Number of Adults in Mother's Household		-0.058 (0.033)		0.213 (0.414)	-0.005 (0.040)	
Constant		0.094 (0.142)			-0.141 (0.226)	
Observations	163	657		132	457	445
Notes: *p<0.05; **p<0.01; standard errors in parentheses; 427 person-year observations missing due to missing income or poverty measure; all models contain year indicators.						
Source: Author's calculations.						

<b>Table 9: Ordered Probit Model of Probability Child is Home Alone, Reported by Parent, NELS</b>	
<b>Variable</b>	<b>Mean (Standard Deviation)</b>
Mother Works Full-Time	0.638**
	(0.026)
Mother Works Part-Time	0.366**
	(0.032)
Observations	11377
<p><i>Notes:</i> Standard errors in parentheses; * <math>p &lt; 0.05</math>; ** <math>p &lt; 0.01</math>; model contains same covariates as Table 3 models; categories for outcome: 1 - never, 2 - rarely, 3 – sometimes, 4 – usually; difference in coefficients for full-time and part-time maternal employment is statistically significant at the 0.01 level.</p>	
<p>Source: Author's calculations.</p>	