The Time Use of Teenagers

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Abstract

Parents and policy makers often voice concerns about the ways in which teenagers use their time. This paper uses the American Time Use Survey to describe the time use of teenagers ages 15-17, with particular focus on activities that affect the teenager's well-being such as sleep patterns, eating habits, schoolwork and television viewing. We also examine family correlates of teenagers' time use. We find large gender differences, with girls spending significantly more time doing housework, caring for younger siblings, and studying, and less time watching television. Our results indicate that teenagers with a single parent engage in more paid work, go to bed later, and are less likely to eat dinner with their parent. Adolescents in households with more educated parents spend more time studying and less time watching television, are more likely to eat dinner with a parent but they also get less sleep.

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Introduction

Adolescents' time use is of great concern to both parents and policy makers. On the one hand, there is concern that an adolescent with too much idle time will be prone to engage in risky behavior with detrimental consequences. Much of the conversation about children's time use, in general, is about whether children have too much freedom from adult supervision and whether they spend too much time engaged in leisure pursuits with little-to-no developmental benefit (see Raley 2006 for a discussion). On the other hand, others argue that children may be overscheduled with commitments to a large number of organized activities and a full schedule that often dominates family time in general (Lareau 2003). Adolescents may be especially stressed by a dizzying array of choices about whether to engage in paid work outside of school, how much to become involved in extracurricular and volunteer activities, and how to balance school responsibilities with social activities with friends. Parents often try to influence these decisions, in part because they assume that how children spend their time matters for their future achievement and success (Fields et al. 1994; Dodson & Dickert 2004).

Although there is probably not universal agreement among parents about what constitutes the best allocation of time during adolescence (e.g., is it good for teenagers to work or will this jeopardize school performance?), there are still certain activities that many parents would agree are beneficial for youth and other activities that are frowned upon. Many parents express a preference that their children read books or study rather than watch (too much) television or spend too much time playing video games. That is, from a parent's perspective, good behavior often includes devoting time to productive activities such as studying, reading, healthy recreational activities, and helping around the

house, as well as developing good habits such as going to bed early, eating a healthy diet, and staying out of trouble.

Adolescents' perspective on "good behaviors" may differ from that of their parents. The adolescent years are often characterized by a certain degree of conflict between parent and teen. Parents and teenagers can easily disagree about how a teenager's time should be used and which activities are appropriate. For example, beeper studies show that teenagers are most happy when they are partying or spending time with a romantic partner (Larson 1998). These activities probably rank much lower in terms of a parent's preference for what their teenage child should be doing with his or her time.

A parent's ability to enforce a certain level of good behavior depends on at least two factors: time spent with the child and energy. For many aspects of good behavior, parental monitoring is required, such as being present to see the child work on his or her homework or observing what a child eats and what time children go to bed. In addition to monitoring, discipline takes a certain level of emotional energy to carry out successfully.

We might expect that certain types of families have greater ability to invest time and energy in monitoring the behavior of teenagers than others. For example, time and energy may be in short supply in single-parent families: McLanahan and Booth (1991) review several studies that show that single parents are less involved in monitoring their children's activities. The distinction between time and energy is probably also important in assessing the impact of working parents on teenagers' behavior. Some work schedules may allow employed parents to have almost as much time with their teenagers as non-working parents (Bianchi 2000), especially given teenagers' school and work commitments, but parental employment may have a draining effect on energy levels that

decreases the ability to enforce good behavior. For example, Galinsky (1999) finds that only 10% of children in grades 3 through 12 wish they had more time with their mother, but 34% wish their mother was less stressed and tired, indicating that children seem to note the distinction between time and energy. (The corresponding numbers for fathers are 16% and 28%.) Working parents may find sharing meals with children more difficult and may be less able to enforce sleep schedules for teenagers since their work schedules may cause them to go to bed before their children do. However, the impact of parental paid work hours may be lessened in families with more income because they are able to outsource many aspects of home production, freeing up a larger share of available time and energy for parenting.

The contribution of this paper is two fold. First, we update and expand what is known about teenagers' time use. Our estimates are derived from a nationally representative sample of teenagers who report on their activities during the previous day using a time diary format that minimizes social desirability bias and encourages accurate recall of all activities. Second, we assess how adolescents' time use varies by parental and household characteristics, including parental education, maternal employment, number of parents in the household, and family size, in order to suggest whether parental time and energy are in shorter supply in some households than in others with possible detrimental consequences for adolescent children.

We use data collected from over 2000 adolescents, aged 15 to 17, in the 2003–2004 American Time Use Survey (ATUS) to describe the full range of daily activities and focus on specific dimensions of time use that may be important for teenagers' cognitive and social development. These include the time adolescents spend on activities

that build skills or responsibility: time in paid work, time spent studying, and time helping with housework and child care. We also examine television viewing and sleep patterns, arguing that sleep patterns have implications for performance in "productive" activities like school and that (too much) television viewing can crowd out other activities such as active leisure, reading and studying. Bedtimes and time spent watching television may also index the effectiveness of parental influence over adolescents' behavior. Finally, we explore additional aspects of parental involvement and monitoring that are afforded by the time diary data collection: the time teens spend eating dinner with a parent and the time they spend in the after-school hours without parental supervision.

Background

To date, there has been some research on how children's time use in activities such as housework, homework, and television watching varies by different family environments in which children are raised (Bianchi & Robinson, 1997; Gager et al. 1999; Hofferth & Sandberg, 2001; Timmer, Eccles, & O'Brien, 1985) but most often the focus has been on younger children. Insights on adolescent time use have been provided by studies that assess what teenagers are doing when a beeper goes off (Larson 1998) , although the representativeness of the samples of youth who participate in these studies is unknown. In addition, survey questions about time use have been included in large-scale nationally representative studies of adolescents (e.g., in the 1980 High School and Beyond survey, high school students were asked, "Approximately what is the average amount of time you spend on homework a week?" (Fehrman et al. 1987; Keith 1988)) but a problem with such questions is that they are prone to social desirability bias. Survey

estimates used to approximate time-use patterns often suffer chronic overestimation of actual behavior, in part related to the reporting burden associated with recalling routine tasks over extended periods of time (Robinson & Bostrom, 1994; Robinson and Godbey (1997), and Bianchi et al. (2006).)

Although there is a rich history of time diary data collection in the U.S., only some of the collections have included children (of any age) and often the information on the families of those children is limited. In terms of national time diary studies, the 1975 study included a small follow-up in 1981 of parents and their children (Timmer et al. (1985); the 1985 collection included children over age 12. Some information on children of all ages under age 18 is available for the mid-1990s (Robinson and Bianchi 1997).

Other assessments of children's time allocation are restricted in scope (e.g., to children in two-parent families analyzed by Zick and Allen (1996)) or limited in geographical coverage (e.g., children in California analyzed by Bianchi and Robinson (1997)) or both (children in two-child, two-parent families in Pennsylvania analyzed by Crowder and McHale (2005)). Not until time diaries were included as part of the Panel Study of Income Dynamics Child Development Supplement (PSID-CDS), and analyzed by Hoffereth and Sandberg (2001), was there an in-depth look at how a nationally representative sample of children under age 13 use their time. The recently released PSID-CDS II includes additional time diaries of this original sample, six years later and provides information on teenagers for the first time, some of which is tabulated in Raley (2006).

What we do know from these data suggest that children from single-parent families spend more time watching television and engaged in housework chores and less

time engaged in educational activities, such as homework and reading (Bianchi & Robinson, 1997; Gager, Cooney, & Call, 1999; Raley, 2006). Children with an employed mother, in general, watch less television, and among those under age 13, they also spent less time in play, structured activities, eating, and sleeping (Hofferth & Sandberg, 2001). Finally, children with highly educated parents spend more time on homework and reading and less time on television (Bianchi & Robinson, 1997; Hofferth & Sandberg, 2001). Prior studies do not provide much evidence on how much time children spend unsupervised, during high-risk, after-school hours, or engaged in family routines such as eating meals together and how this varies by parental characteristics.

As background for the current study, we first review what is known from past research about a set of activities that might be viewed as important for adolescents and that we focus on in subsequent multivariate analyses. Then we review the relationship between family characteristics – maternal employment, single parenting, parental education, and family size – and adolescents' time use.

Teenagers' Time in Productive Activities

Housework and Childcare. Parents may enlist, indeed expect, older, teenage children to take on more responsibilities around the house, such as housework and childcare, than their younger counterparts. The literature suggests both positive and negative effects of these types of responsibilities for adolescents. For instance, the development of responsibility, maturity, an ability to plan ahead, a concern for others, and a feeling of being part of the family may be facilitated by care responsibilities (Smolensky & Gootman 2003; Aronson et al. 1996; McHale et al. 1990). Conversely,

adolescents' increased responsibilities may force them to assume adult roles prematurely, increasing stress, anger, anxiety, and depression, and decreasing opportunities to participate in extracurricular activities (Smolensky & Gootman 2003; Clark-Kauffman et al. 2002; Capizzano et al. 2004).

Recent research suggests that among the 20% of families with two children, one under 12 and one between 12 and 18, who regularly use adolescent care, they use it for an average of 10 hours per week (Capizzano et al. 2004: 14). Additionally, 9th grade girls and boys spend an average of 17 and 15 hours per week, respectively in housework tasks. These figures drop to approximately 13 and 9 for 12th grade girls and boys (Gager et al. 1999).

Paid Work. Similar to household responsibilities like housework and childcare, paid employment may provide training in important skills and responsibilities (Hofferth & Sandberg 2001). Conversely, paid work may interfere with adolescents' ability to complete schoolwork (Zill, Nord, & Loomis 1995). Recent research has found a positive relationship between age and time spent in paid work: 9th grade girls and boys work an average of 7 and 3.5 hours per week, respectively; by 12th grade, these figures have jumped to 14 and 12, respectively (Gager et al. 1999).

Studying. In addition to simply attending school, studying regularly is presumed to improve academic performance. As with paid work and household work, older children tend to spend more time studying than their younger counterparts. Available estimates for children ages 12-18 show that, on average, homework accounts for about five hours per week of these children's time (Raley 2006).

Leisure Activities and Sleep

Television. Parents and child advocates have long decried the negative effects of television on children's behavioral and achievement outcomes. Too much violence, too much sex, just plain "too much" t.v. have fueled concerns about excessive television viewing (Kubey and Cikszentmihaly 1990). While developmental effects are less clear (Larson and Kerma 1999), watching a lot of television has been linked to lower cognitive test scores (Timmer, Eccles, & O'Brien 1985), less time spent in activities such as reading and studying (Koolstra & Van Der Voort 1996), and high levels of obesity (Robinson 2001). Estimates of the time children spend watching television are available for the age group 12-18 and show that, on average, children in this age range spend fifteen hours per week watching television (Raley 2006). Given that television viewing peaks during the ages of 10-15 (Bianchi & Robinson 1997; Larson, Kubey, and Colletti 1989; Larson 2001; Meeks and Mauldin 1990; Timmer, Eccles, & O'Brien 1985), it is likely that a separate analysis of television viewing among 15-17 year olds would produce a somewhat lower estimate.

Sleep. Sleep, or the lack of it, has also received considerable attention by researchers. A large body of literature has demonstrated the importance of sleep and its timing to alertness and cognitive functioning, as well as the health consequences of sleep deprivation (Durmer & Dinges 2005; Everson 2005). Children's loss of sleep is arguably of even more concern, given that these are the prime years when physical as well as cognitive development is in full swing. Therefore, what time children go to bed and how long they sleep are of considerable importance. These aspects of teenage behavior have received very limited empirical attention in prior research.

Parental Involvement

Family Meals. As children age, the likelihood that they will spend time with a parent diminishes. However, there are still some activities, such as mealtime, which provide a forum for families to come together. Research reveals this type of activity is an important component of healthy family functioning (DeVault, 1991). Furthermore, some studies find that eating dinner as a family is associated with higher intake of fruits and vegetables and lower likelihood of skipping breakfast among youth (Videon and Manning 2003) as well as a lower intake of fried foods and carbonated drinks (Gillman et al. 2000). In addition to the nutritional benefits of eating together, a higher frequency of family meals is also associated with lower levels of tobacco, marijuana, and alcohol; better grades in school; and less depressive symptoms (Eisenberg et al. 2004). These latter correlations with family meals may suggest that eating together is an indicator of the underlying degree of family cohesion that may have spillover effects on a broad array of adolescent behaviors.

Unsupervised Time. There is widespread belief that parental supervision provides a buffer against the temptation of undesirable behaviors such as smoking, drug use, premarital sex, and criminal activity. Indeed, after-school activities are generally advocated under the rationale of reducing the amount of "free-time" that teenagers have before their parents return from work. Research indicates that the highest rates of juvenile offending occur between the hours of 3:00 p.m. and 8:00 p.m. (Fox, 1996; Heymann, 2000; Snyder & Sickmund, 1999) and teenagers are most likely to engage in sexual intercourse between 3:00 p.m. and 6:00 p.m. (D. A. Cohen, Farley, Taylor, Martin, & Schuster, 2002). Parental supervision and attention during these "high risk" periods

decreases the chances of delinquent behavior among youth (Richardson, Radziszewska, Dent, & Flay, 1993).

Sources of Variation in Teenagers' Time Use: Parental Characteristics

As noted earlier, families may vary in their ability to influence and monitor adolescents' time use. Four important sources of variation in the time and energy adults have for parenting include maternal employment status, parental marital status, parental education, and family size.

Maternal employment. Recent attention has been given to the potentially negative relationship between maternal employment and children's subsequent behavior and cognitive outcomes (Waldfogel, Han, & Brooks-Gunn, 2002). One of the ways in which maternal employment might affect adolescent outcomes is that work removes the parent from the household. They are therefore less available and have less time to monitor and supervise children during the high-risk, after-school hours than nonemployed mothers (Coleman 1988).

Recent research, much of it on younger children, finds mixed support for this notion. In their study of children ages 3-11, Bianchi & Robinson (1997) find that children of mothers employed part time watch less TV than their counterparts whose mothers are full-time homemakers. Analyzing data on children ages 3-12, Hofferth & Sandberg (2001) obtain similar results, noting that children with an employed mother, in general, watch less television. Zick and Allen (1996) also find that teenagers in families with an employed mother spend more time studying (with those with full-time working mothers studying more than part-time mothers). This maternal employment result is

unique to the teenage years and does not appear among the younger age groups.[1] Gager et al. (1997) find no significant differences in the housework time (which includes caregiving to children and elders) of adolescents ages 15-17 by maternal employment status.

Parental Marital Status. Like maternal employment, single parenting may also be negatively correlated with behavioral and cognitive outcomes because instead of having two parents to monitor the behavior of children and invest in their development, there is only one. Without the aid of a partner, the ability of a single parent to provide parental coverage is most likely compromised. In addition, the ability to forge ties with the community that confers valuable social capital to children is probably more difficult in the absence of a second parent (Bianchi & Robinson, 1997; Coleman 1988). In line with this notion, previous research suggests that teenagers ages 12-17 in single-mother families spend less time studying than those in two-parent families (Zick and Allen 1996) and children ages 5-18 spend less time engaged in educational activities, such as homework and reading, and more time watching television (Raley 2006). Gager et al. (1999) find that adolescents in single-parent households spend significantly more hours per week in housework, including providing care to children and/or elders. On the other hand, Bianchi & Robinson (1997), in their analysis of younger children ages 3-11, find that the marital status of the parent has no statistically significant effect on the time these children reported reading, watching television, or studying once the educational attainment of the single parent was controlled.

[1] Hill, Xeung, and Duncan 2001 have noted that this type of maternal employment finding may be the result of reverse causality where parents may adjust work hours in response to a child's bad behavior.

Parental Education. Previous research suggests differences by education in the amount of time and type of activities parents engage in with their children (Timmer, Eccles, & O'Brien 1985; Hill & Stafford 1974; Leibowitz 1974, 1977; Hill & Stafford 1985). More recent research on children ages 3-12 finds a positive association between the education of the household head and children's time spent in housework, reading, and studying, while children of more educated parents spend less time watching television (Hofferth & Sandberg 2001; Bianchi & Robinson, 1997). Among adolescents, the positive association between parental education and housework is negative, suggesting that adolescents with more highly educated parents do less housework than their counterparts with less well-educated parents (Gager et al. 1999).

Family Size. The existing literature on family size suggests that number and age of siblings may influence the tasks teenagers are called upon to do and also may be correlated with the energy parents devote to monitoring adolescents' behaviors. For example, we might expect adolescents in larger families (with more children) to spend more time providing care to younger siblings and doing housework. Research on the housework time of adolescents suggests that those with larger families do significantly more housework than their counterparts in smaller families (Gager et al. 1999). Similar results are obtained for children ages 3-11 (Bianchi & Robinson 1997), though the authors find no relationship between family size and study time, or the likelihood of reading or being read to. Nonetheless, we might expect family size to be related to adolescents' allocation of time to "productive" time uses, given that children from smaller families score higher on achievement tests (Blake 1989) and have higher

educational and occupational attainment later in life than children in larger families (Mare 1995).

Expectations

Given previous research, we expect maternal employment to be associated with less time studying, later bedtimes and less time sleeping among adolescents. That is, when parents are less available to their teenage children due to competing commitments, adolescents' behavior will deviate more from the time use practices that parents find ideal. Hence, we also expect maternal employment to be associated with more time watching television and we expect that adolescents with a working mother will have more unsupervised time after school and will less often eat dinner with a parent. On the other hand, there may be greater demands on the adolescent to contribute time to housework and childcare, activities that might be considered desirable if they help a child develop responsibility and caring for others and if they do not interfere with educational activities.

Our expectations for adolescents in single-parent households are similar given that the constraints of a single-parent household in terms of parental coverage are similar to those of a two-parent family in which the mother is employed, for many of the same reasons. However, single mothers may face even greater shortages of time and energy than employed, married mothers who have a spouse with whom to share supervision and monitoring of teenage children.

We expect parental education to be positively associated with adolescents' time spent in homework, and negatively associated with time spent watching television and

doing housework. Supervision and parental involvement with adolescent children may also be higher in families with more highly educated parents.

Among children with larger families, we expect to see more time spent in housework in part because there is more housework to do. Expectations about parental ability to supervise homework and bedtimes and be with children after school or for meals are less clear. Parents who choose to have more children may do so because they are especially interested in devoting time to parenting. On the other hand, those who have more children have potentially more competition for their time and energy and may be less able to monitor their teenagers' behavior, especially when there are younger siblings competing for parental time and attention.

Data

We use data from the American Time Use Survey (ATUS), sponsored by the Bureau of Labor Statistics and conducted by the U.S. Census Bureau. The survey was first fielded in January 2003 and there are currently three years of data available. For the purposes of this analysis, we combine ATUS data from the 2003 and 2004 collections to assess teenagers' time use and sources of variation

The target sample of ATUS respondents is the U.S. civilian non-institutionalized population age 15 and older. Individuals are randomly selected for participation in the survey from households completing their eighth and final month of the Current Population Survey (CPS). ATUS interviews typically take place between two and four months after the household's last CPS interview. Using computer assisted telephone interviews, ATUS respondents are asked to provide a detailed account of one 24-hour

period, i.e., what they were doing between 4:00 a.m. of the previous day and 4:00 a.m. of the interview day. For each activity reported, the respondent is asked how long the activity took place, where they were, and who was with them. Approximately 21,000 individuals were interviewed in 2003, 14,000 in 2004, and 13,000 in 2005. The response rate was about 57 percent in all three years.

We restrict our sample to 2,059 respondents who were ages 15 , 16 and 17 at the time of the survey and who live in a two-parent or single-mother household. We dropped 108 teens living with a single father from our analytical sample. The detailed nature of the time diary format provides a novel look at the way teenagers use their time with a sample size large enough to examine differences by the individual's age and family characteristics.

Measures of Teenagers' Time Use

In many time use studies of adults, activities are separated into four major categories: contracted time or paid work, committed time or unpaid work in the home (housework and child care in this analysis), personal care (sleep, eating and grooming activities) and a residual of free time activities. We use similar broad categories to organize the description of teenage time use except that we separate educational activity into a separate category in recognition of the fact that adolescents spend so much of their time in school or in related activities such as doing homework. Shopping is often included as unpaid household work in studies of adults but we categorize this activity under free time for teenagers. We sum total minutes per day spent in all activities to

account for the full 1440 minutes per day and show averages separately by gender. We also disaggregate school days from non-school days.

In our multivariate assessment of teenagers' "productive" activities, we focus on the educational activity of studying, on paid work, and on housework and childcare. We use a measure of the total minutes per day teenagers report doing homework to assess time spent *studying*. We do not focus on time at school, even though this is a much larger portion of an adolescent's time spent on education activities, because this time is largely not under the control of the adolescent. Rather it is set by local school districts. The time teenagers spend on *paid work* is a continuous variable equal to the total minutes per day spent on paid work activities. *Housework* is measured by summing the total amount of minutes teenagers report engaging in activities such as meal preparation or cleanup, laundry, indoor and outdoor chores and so forth. *Childcare* is the total number of minutes per day teenage respondents report spending on a direct childcare activity (e.g., providing physical care, helping and teaching, talking and reading, playing, providing medical care, and so forth). Most often this is care for siblings, though sometimes it is for the respondent's own child.

In addition, we construct indicators aimed at capturing aspects of adolescent behavior that may reflect involvement or monitoring by parents: measures of parental supervision, eating a family dinner together, sleep and bedtimes, and television viewing.

Supervision. We use two measures to examine the amount of time teenagers spend under the supervision of a parent. The first measure, *minutes unsupervised between 3-6p.m.*, is a continuous variable constructed by summing the total number of minutes between 3:00 and 6:00 pm teenagers report engaging in activities without a parent or

household adult present, or are not working, at school, in an organized activity, or traveling.[2] We also construct a dichotomous measure of *high supervision* that codes all teenagers to one if they spend less than 75 minutes unsupervised (the sample median) on their diary day.

Family Dinner. For measures that capture time use in the family domain we estimate the time children spend eating with a parent. *Eating dinner with the family* is constructed by summing the total amount of time teenagers report eating between 4:00 pm and 9:00 pm with a parent present. We also create a dichotomous variable, *family dinner*, equal to one if a teenage respondent reported spending at least 20 minutes eating with a parent.

Sleep and bedtime. We assess teenagers' sleep in a couple ways. First, we assess their *total amount of sleep* and construct a measure of the length of time they spend sleeping at night. We also use a measure that captures teenagers' *bedtime*. It is set equal to the time teenagers report going to bed on their diary day. Finally, we construct two dichotomous variables: *early sleep*, which equals one if teenagers report going to bed before 10:00 pm; and *9+ sleep hours*, which equals one if teenagers get at least nine hours of sleep on their diary day. These restrictions reflect the recommendations of the National Sleep Foundation. About 42 percent of the teenagers in our sample meet the sleep standards.

Television viewing. We assess television in two ways. First we use a continuous measure equal to the total minutes per day teenagers report *watching television*. Second, following the guidelines of the American Academy of Pediatricians, we construct a

[2] Supervised time includes time in which the teenager is with a parent or other household adult, working, at school or other organized activity, or traveling. We are unable to classify time in which the respondent is home with his or her parent in another room or at a friends house with an adult present.

measure of *low television* that equals one if a teenager reports spending no more than two hours in front of the television. About 64 percent of the teenagers meet this television standard.

Family Characteristics and Control Variables

Since the household from which the ATUS respondent is drawn has participated in the CPS, we also have very detailed information on the educational attainment, labor force participation, and marital status of the youth's parents. We use this information to look at how the time use of teenagers varies by their family circumstances.

We code teenagers as living in two-parent and single-mother families by using the relationship of the teenage respondent to other members on the household roster. Those teenagers who have both a mother and father present in the household we code as living in a two-parent family. If the mother is the only parent in the household, we code that teenager as living with a single-mother. Teenagers in other living situations (i.e., with only a father or with no parent present) are dropped form the analysis because sample sizes are small.

We use a series of three dichotomous variables to assess the extent of maternal labor force participation. We code mothers as working *full time* if they report being employed and working at least 35 hours per week. Mothers are coded as working *part time* if they report being employed, but work between 1 and 34 hours per week. Mothers who do not report being employed are coded as *nonemployed* (omitted category in regression analyses).

We use the education of the mothers to assess the relationship between *parental education* and teenage time use. Mothers are coded into three dichotomous variables based on their levels of education: mothers with a college degree or higher; mothers with a high-school diploma or some college but no college degree; and mothers with less than a high-school diploma (omitted category in regression analyses).

We use the mother's report of the number of household children <18 to measure family size. *Number of children* is a variable equal to the total number of children in the household. If there are no additional children in the household, we create a dichotomous variable equal to one that indicates the teenager is an *only child*. Note, the teenager may not be the only child in the family but is the only child who resides in the household.

In addition, we control for a set of demographic variables, including *sex* of the teenage respondent, *age*, and their *race/ethnicity*. Female teenage respondents are coded one. We use three dichotomous variables to capture the age of the teenager: age 15 (omitted category); age 16; and age 17. Race/ethnicity is comprised of four dichotomous variables: white, non-Hispanic (omitted category); black, non-Hispanic, people of Hispanic origin, and all others. Where appropriate, we also use the day and month to construct two additional variables that control for whether the diary occurred on a weekend or during the summer.

In constructing our estimates of time use, we also used the day, month, and year the teenager completed their diary to identify whether or not the individual attended school on their diary day. We also distinguish whether the diary day would be considered a school-night. For some of the analyses, particularly those focused on sleep patterns, we

want to focus on activities that occur on school-nights since these would presumably influence school performance the next day. Using the day and month that the diary is completed, we code diaries as school nights if they occurred between Monday and Thursday during the months of September–May.

We use ordinary least squares (OLS) regression to examine the association between parental and household characteristics and teenagers' use of time, controlling for important covariates associated with time use. For teenagers' activities that are dichotomized, we use a linear probability model to assess the probability of the particular event occurring and the association of the occurrence with each of the covariates.

Results

Descriptive Results

Table 1 shows the means and standard deviations on the characteristics of our sample. The sample is split roughly equally by gender (51.5 % male), with 29% age 15, 35% age 16, and 36 percent age 17. Approximately 80% of the respondents are non-Hispanic whites, 14% are non-Hispanic blacks, 15% are Hispanic, and 5.5% are some other race. The majority of teenagers have a mother with a high-school degree (59%), while 29% of the mothers have a college degree or more. Slightly more than one-quarter of the sample lives in a single-mother household, while the majority (74%) are living with two parents. The majority of mothers (55%) work full time, 15% work part time, and about 29 percent are not employed. The mean number of children in the household is 1.5. One-quarter of the teenagers in our sample (25%) are the only child living in the household.

Table 2 shows the average minutes per day spent in various activities by gender and whether the adolescent was sampled on a school or non-school day. The most common activities in the lives of teenagers include sleep (565 minutes per day or an average of 9.4 hours per day), school (around 300 minutes, or 5 hours per day on school days, 170 minutes when averaged across all days including non-school day diary days), and television (143 minutes per day for boys and 127 minutes per day for girls). Other common activities include general leisure (86-90 minutes per day), paid work (about 50 minutes per day), sports and exercise (59 minutes per day for boys and 30 minutes per day for girls), eating (about 50 minutes per day), games (46 minutes per day for boys and 10 minutes per day for girls), grooming (38 minutes per day for boys and 59 minutes per day for girls), studying (32 minutes per day for boys and 50 minutes per day for girls), and using the computer (about 20 minutes per day).

One initial motivation for this study was to understand the degree to which teenagers might be contributing to household labor and these simple summary statistics show that in general teenagers report doing some housework (30-40 minutes a day) but spend almost no time caring for younger siblings (3 minutes per day for boys and 7 minutes per day for girls). Sadly, at least form the perspective of many adults, reading is also not a very popular activity among teenagers (8-10 minutes per day).

Table 3 shows summary statistics on measures of time use where we exploit additional information from the diary such as when the activities took place during the day and who was present. On average, regardless of whether the diary was taken on a school day or school night, teenagers averaged about 73 minutes per day unsupervised between the hours of 3:00 and 6:00 pm. The average amount of time eating dinner with

parents was 12 minutes and the average bedtime was around 11:00 pm. These averages mask a great deal of variation, however. Fewer than half of the teenagers' diaries included any time eating dinner with parents but at the 75th percentile of the distribution, teenagers averaged 20 minutes in dinner with parents. One-quarter of teens were in bed by 9:40pm (or earlier) while another one quarter did not go to bed until 11:30 pm (or later). Because this table includes non-school as well as school nights, the percentage with very late bedtimes is higher than would be observed if the sample were restricted to school nights.

Table 4 shows that about 64 percent of the sample watches less than two hours of television a day (low television). A little over half of teenagers spend less than 75 minutes unsupervised (i.e., receive high supervision) in the after-school, 3-6pm time period. About 3 in 10 teenagers reported eating dinner with a parent on their diary day. Approximately 42 percent of the sample went to sleep before 10:00 pm on a school night.

Regression Results

Tables 5-7 show the results from multivariate analyses regressing various measures of teenage time use on parents' and household characteristics.

Productive Activities

Housework and Childcare. From the descriptive statistics in Table 2, we saw that girls spent more time than boys in housework. Regression results in Table 5 indicate that this difference is statistically significant, with girls spending about 13 minutes per day more than boys in housework and 5 more minutes per day in childcare. Contrary to our expectations, we see no statistically significant effect of maternal employment, parental marital status, or parental education, on the housework and childcare time of adolescents.

In line with what we expected, the results indicate a positive association between the number of children in the household and adolescents' time spent in childcare. Adolescents of "other" race categories spend significantly more time in childcare than their white, non-Hispanic counterparts. Adolescents also spend more time in housework on the weekend and in the summer.

Paid Work. While Table 2 suggested that girls spend slightly less time in paid work than boys, Table 5 shows that this difference is not statistically significant. The results indicate a positive and statistically significant relationship between the age of an adolescent and his/her time spent in paid work. Contrary to our expectations, we see no statistically significant relationships between maternal employment, parental education, and family size and adolescents' time spent in paid work. The results do show that adolescents in single-mother families work significantly more than their counterparts in two-parent families. Teenagers also work more in the summer and on the weekend. Hispanics and teenagers of a race other than non-Hispanic whites do significantly less work for pay than their non-Hispanic, white counterparts.

Studying. The results in Table 5 suggest that females spend significantly more time studying each day than their male counterparts (20 minutes per day more). Other, non-Hispanic adolescents also spend significantly more time studying than their white, non-Hispanic counterparts (31 minutes per day more). In line with our expectations, we find that adolescents whose mother has at least a college degree spend significantly more time studying (32 minutes per day) than their counterparts whose mothers have less than a high school diploma. Furthermore, teenagers in single-mother families spend significantly less time studying (10 minutes per day) than their counterparts in two-parent

families. Also in line with our expectations, teens whose mother is employed full time spend significantly less time studying (7.5 minutes per day) than those with a nonemployed mother. The results suggest a negative relationship between the number of children in the household and time spent studying. Adolescents spend significantly less time studying on weekends (35 minutes per day) and in the summer (6 minutes per day).

Leisure and Sleep

Television. Regression results in Table 6 indicate that female adolescents spend significantly less time (12 minutes per day) watching television than their male counterparts. Black teenagers watch significantly more television (20 minutes more per day) than their white counterparts. Age is also significantly and negatively related to television time. Being 17 years old, compared with being 15, increases the predicted probability of watching less than 2 hours of television per day by 7.6%, holding all other variables constant. As expected, compared with their counterparts whose mother has less than a high school diploma, teens whose mother is a high school graduate watch significantly less television (37 fewer minutes per day) and the predicted probability of watching less than 2 hours of television per day increases by about 10%, holding all other variables constant. Teens whose mother has at least a college degree watch 50 minutes per day less television and the predicted probability of watching less than two hours per day increases by 11 percent compared with those whose mother did not receive a high school diploma. Contrary to our expectations, parental marital status is not associated with television time. However, in line with what we expected, teens with a mother employed full time watch significantly more television (13 minutes per day) than their

counterparts whose mother is nonemployed and the predicted probability of watching less than two hours of television per day decreases by 7.8% for teens whose mothers are employed part time as compared with their counterparts whose mothers are nonemployed, holding all other variables constant. There is a positive association between family size and minutes per day spent watching television. Adolescents watch significantly more television in the summer (38 minutes per day) than during the school year and the predicted probability of watching less than two hours of television per day decreases by about 13% in the summer, holding all other variables constant.

Sleep. Our analysis of sleep is restricted to school days. Females get significantly less sleep (22 minutes per day) than their male counterparts and the predicted probability of getting 9 or more hours of sleep decreases by 7.3% for females, holding all other variables constant. Black adolescents also get significantly less sleep than their white counterparts and the predicted probability of being asleep by 10 p.m. and sleeping for at least nine hours decreases by 16% and 11%, respectively, for blacks as compared to whites, holding all other variables constant. For 17-year-olds, as compared with 15-year-olds, the predicted probability of getting to sleep by 10 p.m. decreases by about 14%, holding all other variables constant. The results suggest that, contrary to our expectations, there is no association between parental education, maternal employment, or family size and sleep, being asleep by 10 p.m., and sleeping for at least nine hours. Our findings for marital status differed from what we expected. Rather than getting less sleep, we see adolescents living in a single-parent household get significantly less sleep (34 minutes per day) than their counterparts in two-parent homes and the predicted

probability of getting at least nine hours of sleep increases by 15% for teens with a single parent as compared to their counterparts in two-parent families.

Parental Involvement

Family Meals. As with the analysis of sleep, we restrict our analysis of supervision during the 3-6 pm period to school days, in part because the 3-6 pm time period has the most meaning on school nights. We also restrict the family meals analysis to school nights because the importance of families coming together for an evening meal may be greater on school/work days when members have presumably more often been separated for long periods during the day. The results in Table 7 suggest no gender differences in the time spent eating dinner with a parent or in the predicted probability of eating with a parent. Black adolescents spend significantly less time eating dinner with a parent (about 6 minutes per day) than their white counterparts and the predicted probability of eating dinner with a parent decreases by 18% for blacks, holding all other variables constant. Adolescents age 17 spend significantly less time eating dinner with a parent (about 4 minutes per day) than 15-year-olds and their predicted probability of eating dinner with a parent decreases by about 9%, holding all other variables constant. Contrary to what we expected, there is no association between maternal employment and time spent eating dinner with a parent or the probability of eating dinner with a parent. In line with what we expected, teenagers of mothers who have obtained at least a college degree spend significantly more time eating dinner with a parent (about 5 minutes per day) than their counterparts whose mothers have less than a high school education. Compared with teenagers whose mother is not a high-school graduate, the predicted

probability of eating dinner with a parent increases by 15 percent for teens with a mother who is a high-school graduate and by 18 percent among teens of mothers with a college degree. Also in line with our expectations, teens who live in a single-parent household spend significantly less time eating dinner with a parent (6.5 minutes per day) than their counterparts in two-parent households and the predicted probability of eating dinner with a parent decreases by 15% for teens in single-mother households, holding all other variables constant. Family size is positively associated with time spent eating dinner with a parent.

Unsupervised Time. Table 7 shows that no gender differences exist in the time adolescents spend unsupervised during after-school hours. Black children spend significantly more time unsupervised (15 minutes per day) compared to their white counterparts. The predicted probability of experiencing high supervision is about 9% higher for 16-year-olds as compared to 15-year-olds, holding all other variables constant. There is no association between parental education, maternal employment, or family size and time spent unsupervised. However, the predicted probability of experiencing high supervision increases by about 13 percent for teenagers whose mothers who have a college degree compared with teens of mothers without a high-school diploma. In line with our expectations, teens in single-parent families spend significantly more time unsupervised (12 minutes per day) compared to their counterparts in two-parent households.

Figure 1 provides further information about the fraction of youth who report spending time with parent at fifteen minute increments across the day. The peak period

occurs at 6:15 pm when about 20% report their parents present. The lower line in Figure 1 shows the fraction of this time that is spent watching television with a parent present.

Discussion

The primary purpose of this paper was to provide a descriptive analysis of how teenagers use their time and investigate family correlates of their time allocation. The ATUS provides one of the first large scale data collections to gather accurate and nationally representative measures of what teenagers do after school, how often they eat with their families, when they go to bed, and how much time they spend studying, reading and watching television.

We find that teens spend the majority of their time sleeping, going to school, and watching television. Girls spend more time helping in the home in terms of both housework and caring for siblings. Girls also spend more time studying and less time watching television and sleeping. In terms of racial differences, Hispanics and those in the other race category, which mostly includes Asians, spend less time working for pay while those in the other race category spend more time in childcare and significantly more time studying. Black teens spend less time sleeping or eating dinner with a parent and more time unsupervised and watching television. Older teens spend more time working for pay and less time watching television or eating dinner with a parent.

We also examine how each of these measures of teenage time use are affected by the presence of one or two parents, parental education, maternal employment, and family size. The results indicate that teenagers with more educated mothers spend more time studying and eating dinner with a parent and less time watching television. Teenagers in

single-mother households spend less time studying or eating dinner with a parent, and more time sleeping, working, and unsupervised. Teens with a full-time employed mom spend less time studying and more time watching television. Children with siblings spend more time providing childcare, watching television, and eating dinner with a parent, and less time studying.

Our findings suggest that certain types of families may face greater challenges in getting their adolescent children to participate in some of the activities parents often favor like studying, watching less television, and eating family dinners, and getting enough sleep. For instance, adolescents in single-parent and dual-earner households spend less time studying than their counterparts in two-parent or single-earner households. This may be due to an inability to monitor children's activities when only one parent is present in the household or when both parents are working. Our finding that adolescents in single-parent households spend more time unsupervised than their counterparts in two-parent households provides further support for the idea that single mothers, due to employment requirements, may be unable to monitor children during the high-risk, after-school hours.

Given the concern among parents and policy makers over how teenagers use their time and how their time use affects their future achievement and success, we need to develop ways to help parents with time constraints to ensure that children are spending time in the productive activities like studying and not watching too much television. After-school programs are one possible solution, but these are not as available to teenage populations as they are for younger children. Enrollment in extracurricular activities

might help to ensure that teens are not spending too much time unsupervised, but these often require financial contributions that lower-income households cannot make.

With cross-sectional data form the ATUS, we cannot definitely establish causal connections between family factors such as parental employment and single-parenting and teenage behaviors. But we can provide description that is consistent with the notion that parental time and energy is in shorter supply in some households than others, with potential consequences for how adolescents structure their lives. Whether differences in teenage time use of the size that we find here are large enough to matter in the long run is a topic that merits further research.

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Table 1. Mean and Standard Deviations of Selected Sample Characteristics

	Mean	Std. Dev.
Teenager Characteristics		
Male	0.515	—
Female	0.485	—
White, non-Hispanic	0.804	—
Black, non-Hispanic	0.137	—
Other race, non-Hispanic	0.055	—
Hispanic origin	0.145	—
Age 15	0.292	—
Age 16	0.348	—
Age 17	0.360	—
Family Characteristics		
Mother is less than high school graduate	0.119	—
Mother is high school graduate	0.591	—
Mother is college graduate	0.286	—
Single mother	0.264	—
Two parents	0.736	—
Mother employed full time	0.546	—
Mother employed part time	0.146	—
Mother nonemployed	0.288	—
Number of children in the household	1.511	0.880
Only child in the household	0.250	—
Diary Day Characteristics		
Summer	0.241	—
Weekend	0.519	—

Table 2. Minutes per day spent in various activities by adolescents ages 15-17 by gender and school day

	Young Men			Young Women		
	Total	School Day	Non-School Day	Total	School Day	Non-School Day
Total paid work	**52.23**	**35.91**	**67.48**	**48.87**	**35.2**	**57.41**
Total household work	**32.78**	**24.94**	**43.06**	**46.02**	**35.74**	**60.52**
Housework	29.73	22.18	39.25	39.2	29.64	52.91
Childcare	3.05	2.76	3.81	6.82	6.09	7.61
Total personal care	**652.48**	**614.52**	**707.42**	**670.98**	**620.42**	**729.44**
Sleep	564.8	526.57	619.99	564.79	513.1	623.6
Meal	49.93	47.77	51.63	47.46	44.72	51.3
Grooming	37.76	40.17	35.81	58.73	62.6	54.54
Total education	**206.03**	**343.34**	**33.89**	**220.83**	**368.91**	**56.09**
School	174.38	300.94	12.96	171.69	306.95	14.65
Study	31.64	42.39	20.93	49.14	61.95	41.43
Total free time	**496.47**	**421.29**	**588.15**	**453.3**	**379.74**	**536.55**
Computer	23.29	19.58	24.86	20.56	17.76	23.42
Organizations	4.18	3.77	3.94	4.8	5.55	3.47
Religion	7.11	1.41	15.83	8.05	4.14	15.61
Visiting	50.46	40.94	63.98	54.99	40.09	71.73
Sports/Exercise	58.62	47.92	68.36	29.67	23.78	34.46
Attending sports	6.06	6.09	7.17	6.04	6.36	6.26
Television	142.73	120.51	169.02	127.1	105.79	151.84
Leisure	85.85	71.04	107.75	90.98	64.87	121.08
Games	46.05	40.93	53.61	10.48	8.05	13.58
Volunteer	14.56	11.85	17.88	20.2	22.23	17.73
Shopping	14.62	10.76	20.47	25.53	16.84	36.11
Traveling	10.19	9.5	10.98	11.05	13.35	9.68
Telephone	7.11	1.41	15.83	8.05	4.14	15.61
Reading	7.59	7.94	6.97	10.31	9.02	11.81
Total minutes	**1440**	**1440**	**1440**	**1440**	**1440**	**1440**
N	1153	431	722	1086	392	694

Notes: All activities are mutually exclusive. School day is defined as a day in which the child did not report attending school.

Table 3. Descriptive Statistics on Teenagers' Unsupervised Time, Eating Dinner with Parents, and Bedtime

	Minutes per Day Unsupervised 3-6pm	Minutes per Day Spent Eating Dinner with Parents	Bedtime
Mean	73.08	12.08	11:04 PM
Standard deviation	17.2	17.2	109.98
25th percentile	60	0	9:40 PM
Median	125	0	10:20PM
75th Percentile	172	20	11:30PM

Notes: These are averaged over the full sample while the regressions predicting bedtime is based on just school-night diaries.

Table 4. Means and Standard Deviations of Binary Time-Use Indicators

Binary Outcomes	Mean	Std. Dev.
Low television	0.643	0.479
High supervision	0.551	0.498
Family dinner	0.322	0.468
Early sleeper	0.419	0.494

Note: Means averaged across a sample of teenagers with school night diaries.

Table 5. Results from OLS Regression Predicting Minutes Per Day of All Teenagers in Productive Activities

	Housework			Childcare[a]			Work			Study		
	Coefficient		SE	Coefficient		SE	Coefficient		SE	Coefficient		SE
Female	12.955	***	3.107	4.920	**	2.013	-6.580		5.694	20.093	***	3.348
White, non-Hispanic (omitted)												
Black, non-Hispanic	-4.639		4.995	1.240		3.297	-12.218		9.154	-6.947		5.383
Other, non-Hispanic	-2.879		6.901	8.048	*	4.224	-21.027	*	12.646	31.318	***	7.436
Hispanic origin	2.565		5.002	0.381		3.061	-27.391	***	9.167	3.742		5.390
Teenager age 15 (omitted)												
Teenager age 16	-1.607		3.905	-0.119		2.528	28.646	***	7.155	4.262		4.208
Teenager age 17	-1.042		3.882	2.163		2.539	62.332	***	7.113	-0.263		4.183
Mother <HS graduate (omitted)												
Mother is HS graduate	-4.378		5.451	2.687		3.447	6.478		9.989	6.990		5.874
Mother has at least college degree	-5.068		5.988	1.678		3.833	-4.985		10.973	31.510	***	6.452
Two-parent family (omitted)												
Single-mother family	2.390		3.719	-0.613		2.480	11.647	*	6.815	-10.210	**	4.008
Mother employed full time (35+ hours)	1.154		3.674	-1.746		2.367	2.411		6.733	-7.446	*	3.959
Mother employed part time (1-34)	5.382		4.836	-2.695		2.982	9.419		8.863	0.509		5.212
Mother nonemployed (omitted)												
Number of children	1.731		1.882	3.124	***	1.016	-1.622		3.448	-3.511	*	2.028
Teenager is only child	-1.199		4.874				-13.985		8.932	-5.380		5.253
Summer diary	17.540	***	3.107	1.456		2.016	10.683	*	5.694	-6.062	*	3.348
Weekend diary	7.064	*	3.647	-0.934		2.364	32.382	***	6.683	-35.378	***	3.930
Constant	20.002	**	8.880	-6.181		5.429	16.263		16.272	41.205	***	9.569
R-squared	0.03			0.02			0.06			0.09		
Number	2059			1194			2059			2059		

***p-value < .01, **p-value < .05, *p-value < .10.

[a] Restricted to teenagers with younger siblings.

Table 6. Results from OLS Regression Predicting Minutes per Day in Leisure and Sleep Activities and from Linear Probility Models Predicting Probability of Watching Low Levels of TV, Going to Bed by 10:00 pm, and Sleeping 9+ Hours on the Diary Day

	OLS Estimates of Minutes per Day Watching Television			Probit Estimates of Watching Low T.V. (Less than 2 Hours)			OLS Estimates of Minutes per Day Sleeping[a]			Probit Estimates of Being Asleep by 10:00 pm[a]			Probit Estimates of Sleeping 9+ Hours[a]		
	Coef		SE	Coef		SE	Coef		SE	Coef		SE	Coef		SE
Female	-12.174	**	6.073	0.022		0.022	-21.825	**	10.538	-0.006		0.039	-0.073	*	0.039
White, non-Hispanic (omitted)															
Black, non-Hispanic	19.326	**	9.765	-0.040		0.035	-34.914	**	16.216	-0.159	***	0.055	-0.111	*	0.057
Other, non-Hispanic	20.835		13.489	0.011		0.048	37.600		23.315	-0.109		0.083	0.142		0.087
Hispanic origin	-14.377		9.778	0.027		0.034	20.784		17.332	0.090		0.065	0.095		0.065
Teenager age 15 (omitted)															
Teenager age 16	-15.402	**	7.632	0.038		0.027	12.031		13.294	-0.013		0.049	0.059		0.050
Teenager age 17	-23.729	***	7.588	0.077	***	0.027	-0.769		13.047	-0.138	***	0.047	0.024		0.049
Mother <HS graduate (omitted)															
Mother is HS graduate	-36.801	***	10.655	0.098	***	0.037	3.405		18.232	0.012		0.068	0.002		0.068
Mother has at least college degree	-49.393	***	11.704	0.114	***	0.040	-8.652		20.055	-0.054		0.074	-0.046		0.074
Two-parent family (omitted)															
Single-mother family	5.406		7.270	-0.024		0.026	34.880	***	12.597	0.062		0.047	0.154	***	0.047
Mother employed full time	13.231	*	7.182	-0.038		0.025	0.614		12.347	0.045		0.046	0.006		0.046
Mother employed part time	10.698		9.454	-0.078	**	0.034	-21.767		17.039	-0.072		0.062	0.007		0.064
Mother nonemployed (omitted)															
Number of children	6.336	*	3.678	-0.019		0.013	-2.688		6.508	0.016		0.024	-0.008		0.024
Teenager is only child	6.866		9.528	-0.009		0.034	-1.640		16.492	-0.051		0.061	-0.018		0.061
Summer diary	38.330	***	6.073	-0.127	***	0.022									
Weekend diary	10.738		7.129	-0.023		0.025									
Constant	147.616	***	17.357				541.170	***	29.177						

R-squared	0.04	0.03	0.04	0.05	0.04
Number	2059	2059	614	614	614

***p-value < .01, **p-value < .05, *p-value < .10.
[a] Restricted to teenagers with a school-night diary.

Table 7. Results from OLS Regression Predicting Minutes per Day in Eating Dinner with a Parent and without Parental Supervision and from Linear Probability Models Predicting Probability of Eating Dinner with a Parent and Experiencing High Parental Supervision (Restricted to school-night diaries)

	OLS Estimates of Minutes per Day Eating Dinner with a Parent			Probit Estimates of Eating Dinner with a Parent			OLS Estimates of Minutes per Day Unsupervised			Probit Estimates of Experiencing High Supervision		
	Coefficient		SE	Coefficient		SE	Coefficient		SE	Coefficient		SE
Female	0.999		1.370	0.000		0.037	-5.555		5.153	0.005		0.040
White, non-Hispanic (omitted)												
Black, non-Hispanic	-5.859	***	2.108	-0.184	***	0.051	15.287	*	7.930	-0.096		0.062
Other, non-Hispanic	4.596		3.030	0.066		0.084	16.718		11.401	-0.125		0.087
Hispanic origin	-1.814		2.253	0.003		0.060	1.287		8.475	-0.008		0.065
Teenager age 15 (omitted)												
Teenager age 16	1.071		1.728	0.008		0.046	-6.048		6.501	0.086	*	0.049
Teenager age 17	-3.814	**	1.696	-0.093	**	0.045	-1.516		6.380	-0.003		0.049
Mother <HS graduate (omitted)												
Mother is HS graduate	3.785		2.370	0.151	**	0.062	-7.844		8.915	0.063		0.067
Mother has at least college degree	4.795	*	2.607	0.184	**	0.073	-9.432		9.807	0.125	*	0.072
Two-parent family (omitted)												
Single-mother family	-6.446	***	1.637	-0.152	***	0.042	11.797	*	6.160	-0.074		0.048
Mother employed full time	-1.236		1.605	-0.059		0.044	-4.068		6.038	0.061		0.046
Mother employed part time	1.928		2.215	0.000		0.058	-0.789		8.332	0.068		0.062
Mother nonemployed (omitted)												
Number of children	1.600	*	0.846	0.032		0.023	-3.221		3.182	0.035		0.024
Teenager is only child	2.370		2.143	0.047		0.059	-3.373		8.065	0.066		0.060
Constant	8.816	**	3.792				88.952	***	14.268			
R-squared	0.10			0.09			0.03			0.04		
N	614			614			614			614		

***p-value < .01, **p-value < .05, *p-value < .10.

[a] Coefficients estimated using OLS Regression.

[b] Coefficients estimated using Linear Probability Models.

Figure 1. Fraction of Teenagers Who Report Their Parents Present (Supervised) for the Activity (Restricted to School-Nights)