

# Parental and Student Time Use Around the Academic Year

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## Abstract

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Keywords: school, time use, student, parent, gender, investment in children

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## Abstract

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## 1. Introduction

How does the school calendar affect the time use of parents and children? School dates are perfectly foreseeable, and individuals have ample opportunity to plan around them. Even so, when school is out, behaviors might change in ways that affect the health and well-being of families with school-age children. In this paper, we seek to understand such changes in behavior and focus especially on differences between mothers, fathers, and older teenage children.

In the United States, roughly 96% of public K-12 schools have a traditional summer break of around 12 weeks.<sup>1</sup> Research into how student and parent outcomes change when school is on summer hiatus includes losses in academic achievement (“summer learning loss”; see Quinn and Polikoff, 2017); decreases in maternal labor supply (Price and Wasserman, 2022); and changes in youth mental health, suicidality, and criminal activity (Hansen and Lang, 2011; Hansen, Sabia, and Schaller, 2022; Jones and Karger, 2023). Another set of studies has examined how parent and student time use differs over traditional summer break months relative to other parts of the year (e.g., Handwerker and Mason, 2017; Gershenson, 2013). To our knowledge, aside from Jones and Karger (2023), none of these previous studies use variation stemming from exact school start and end dates combined with regression discontinuity (RD) methods to identify changes in outcomes.

In this paper, we make three main contributions to the literature on how families’ schedules are affected by the school calendar. First, we exploit information on school start and end dates around the summer break from across the United States combined with American Time Use Survey (ATUS) data, which contain 24-hour time diaries with exact dates, to measure how

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<sup>1</sup> [https://nces.ed.gov/programs/digest/d13/tables/dt13\\_234.12.asp](https://nces.ed.gov/programs/digest/d13/tables/dt13_234.12.asp). Among the school districts in our school calendar data, the average (mean) break is 11.7 weeks. The 5<sup>th</sup> percentile is 9.9 weeks, the 25<sup>th</sup> percentile is 10.9 weeks, the 75<sup>th</sup> percentile is 12.6 weeks, and the 95<sup>th</sup> percentile is 13.7 weeks.

behavior changes when school starts and ends for the year. Our approach allows us to avoid confounding effects due to the school year with other factors that change seasonally such as weather, daylight, and economic conditions (Connolly, 2008; Barksy and Miron, 1989; Geremew and Gourio, 2018; Coglianesse and Price, 2020).

Second, we examine a comprehensive set of 10 time-use categories—including sleep, self-care, household tasks, caring for others, work, education, free time, eating, physical exercise, and traveling—as well as subsets of these categories such as time devoted to specific childcare activities. Most other studies in this literature focus on a narrow subset of activities related to a specific outcome, as highlighted in the next section. Our approach should allow for a more holistic picture of time-use changes around the school year, which we later argue is important for understanding overall changes in health and well-being.

Our third contribution is to look at the time use patterns of both parents (mothers and fathers of school-age children) as well as older teenage (15–17-year-old) students.<sup>2 3</sup> Concerns about time use and its implications for health vary across these groups. For example, most teenagers report getting less than the nationally recommended amount of sleep on school nights (Bandyopadhyay and Ninotchka, 2019); and sleep deprivation among teenagers has been linked to poorer academic performance and worse mental health (Seton and Fitzgerald, 2021). Lack of sufficient sleep is also a problem for adults (Liu et al., 2016), as is insufficient exercise—less than a quarter of U.S. adults exercise enough to meet federal guidelines (Blackwell and Clarke, 2018). Finally, studies show that mothers engage in more educational childcare such as helping

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<sup>2</sup> 15-year-olds are the youngest participants in ATUS, so we cannot examine the time use of younger students in our analysis. A previous study of teenagers' time use examines how activities correlate with family characteristics (such as mother's employment and education) but does not examine how such activities vary with school year dates (Wight, Price, Bianchi, and Hunt, 2009).

<sup>3</sup> We refer to 15-17 year old individuals as students, though it is possible that not all are.

with homework (e.g., Ronning, 2011) and household tasks (e.g., Parker, Horowitz, and Rohal, 2015) than fathers do. We ask whether the summer school break affects time spent in these and other activities that have implications for the overall well-being of individuals in the household.

In our analysis, we find that many behaviors exhibit sharp changes across the start or end of the academic year. The top panel of Figure 1 shows how 15-17 year-olds' weekday time spent in educational activities varies around the school start/end week, and the bottom panel shows the same thing for weekday time mothers of school-age children spend with their children in educational activities (such as helping with homework). "Week zero" is the week that school starts or ends for the year, and positive values indicate weeks during the school year while negative values represent weeks during the summer break. Not surprisingly, in both cases, there is a stark, discrete jump in these activities when school is in session.

Do school start/end dates have broader implications for the way children and parents use their time? We find that they do. First, while both mothers and fathers are in the presence of their children less during the school year, they spend more time actively engaged with their children when school is in session. In total, this change is three times larger for mothers than it is for fathers, which has the effect of widening the gender gap in active time with children compared with the summer break. Second, when school is in-session, mothers of 6–17-year-old children give up 26 minutes each of sleep and free time and 5 minutes of physical exercise per weekday. They spend an additional 35 minutes caring for others<sup>4</sup> Once again, effects for fathers are for the most part qualitatively similar to those for mothers but smaller in magnitude (with the exception

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<sup>4</sup> As a placebo test, we examine women with no children in the household between ages 3 and 18, whose time use patterns should generally be unaffected by school dates (because it is our sense that pre-schools often follow the same academic calendar as K-12 schools in the area, we exclude those with 3-5-year-olds as well). Across the 10 categories of time use, we find only one statistically significant effect (at the 10% level); furthermore, all coefficients are small in magnitude.

of work time).<sup>5</sup> In the cases of sleep and caring for others, the gender differences in effects are relatively large and statistically distinguishable (at the 10% and 1% level, respectively). When comparing our RD estimates to regression estimates of (adjusted) means, we find that the latter are qualitatively similar but generally modestly understate the effects of the school year on time use for mothers of school-age children.

Which mothers are most affected by the school year? The changes in time use we observe are driven primarily by mothers of younger school-aged children (6-11 years old), among whom both sleep and free time losses are both more pronounced (~35 minutes each).<sup>6</sup> Mothers of these younger children also increase the amount of time spent caring for others by 52 minutes during the school year. Corresponding effects for mothers of children ages 12-17 are much smaller and generally statistically insignificant at conventional levels.

We also distinguish between mothers who were employed 2-5 months prior to their ATUS interview (i.e., as of the time of their last CPS interview) and those who were not employed. Previously employed and not-employed mothers both see reductions in sleep and free time and increases in care for others when school is in-session, but magnitudes are somewhat larger for those who were not employed. Dividing our sample of mothers by household income, we find that the results are similar across low- and high-income households with a few exceptions discussed below.

Overall, our results on time-use patterns of parents around the school calendar suggest that mothers, particularly those of younger school-aged children, are substantially affected by whether school is in session. Because activities like sleep, free time, and exercise have been

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<sup>5</sup> Because we define fathers and mothers based on having children in the household, we do not consider fathers and mothers who are, for example, divorced or separated, and not living with their children.

<sup>6</sup> In making this statement, we are making the comparison between those with 6-11 year olds (and no 12-17 year olds) and those with 12-17 year olds (and no 6-11 year olds). Thus, we exclude those with both age groups.

linked to mental health and because they are markedly different during the school year, the well-being of mothers may also suffer in some ways during that time and contribute to the gender gap in mental health (Churchill et al., 2020; Golin, 2022). Analyzing how the school year affects mothers' downstream health outcomes is beyond the scope of this paper, but we believe it is an important area for future research.

We now turn attention to how 15-17 year-old children's time use varies around the school year. These individuals report spending more than 5 and a half fewer hours in educational activities on weekdays when school is on summer hiatus.<sup>7</sup> This time is used in a variety of ways when school is out: notably, free time increases by a little over 2 hours, sleep time increases by 1.3 hours, work time and time spent doing household tasks increase by 0.8 and 0.7 hours, respectively, and physical exercise increases by 0.6 hours. Thus, (older) students themselves are even more affected by whether school is in-session than parents when it comes to sleep, free time, and exercise.

We show that despite somewhat later summer bedtimes, teenage students more than compensate with later wake times, on average. This is consistent with research showing that children sleep more when school start times are pushed back even though they could (in principle) undo the benefits with later bedtimes (Dunster et al., 2018). Regarding exercise, just over half of U.S. high-school students attend physical education classes in an average week (and only 30% attend daily), so even though we do not observe time spent in P.E. classes during the school day (such time is counted as taking classes in our data), it is very likely that physical exercise rises during the summer break months for the average youth.<sup>8</sup>

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<sup>7</sup> For a reference point, the length of the average American school day was about 6.6 hours in 2008: [https://nces.ed.gov/surveys/sass/tables/sass0708\\_035\\_s1s.asp](https://nces.ed.gov/surveys/sass/tables/sass0708_035_s1s.asp).

<sup>8</sup> <https://www.cdc.gov/healthyschools/physicalactivity/facts.htm>.

On the other hand, we find that the majority of the increase in summer free time for teens is spent on video gaming, television, and computer use: in total, they increase by nearly an hour and a half over the summer (roughly 70% of the total increase in free time). The health consequences of these activities are not fully understood (Dubicka, Martin, and Firth, 2019; Odgers, Schueller, and Ito, 2020). In the case of video games, for example, recent study findings indicate certain video games may have therapeutic potential for improving outcomes (see Zayeni et al., 2020, for a review); however, 41% of teenage boys and 11% of girls themselves report that they spend “too much time” playing video games.<sup>9</sup> Meanwhile, some recent papers suggest that social media use, which now represents a large share of screen time among teens, negatively affects mental health (Allcott et al., 2020; Braghieri, Levy, and Makarin, 2022). 41% of girls and 31% of boys say they spend too much time on social media.<sup>10</sup>

Teenage mental health outcomes vary by whether school is in session, with suicides and mental health visits increasing during the school year (Zhang et al., 2021; Hansen and Lang, 2011; Hansen, Sabia, and Schaller, 2022). Though there are many potential explanations for this phenomenon, our results suggest that time use, and particularly how much sleep students get, may play an important role. This is another topic for future research. At the same time, the implications of teenagers devoting such a large share of their extra summer free time to screens, as well as policies that encourage teens to use their time differently, warrant future study.

## **2. Related Literature**

There is long-standing interest in how school attendance affects parents’ and children’s behaviors. Many papers in this literature focus on policies that affect the availability of school in children’s pre-K or kindergarten years (see, for example, studies on maternal labor supply in

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<sup>9</sup> <https://www.pewresearch.org/fact-tank/2018/09/17/5-facts-about-americans-and-video-games/>

<sup>10</sup> <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>



Gelbach, 2002; Cascio, 2009; Fitzpatrick, 2012; and studies on children's academic achievement and long-run outcomes in Heckman et al., 2010; Bailey, Sun, and Timpe, 2021). Another set of studies focus on policies that affect how much time students are in high school, such as those on academic achievement (Liu, Lee, and Gershenson, 2021) and short- and long-term criminal outcomes (e.g., Anderson, 2014 and Bacher-Hicks, Billings, and Deming, 2019). Lastly, there are studies on the effects of the timing of breaks during the school year (Graves, 2013a,b) and the length of the school week (Ward, 2019; Duchini and Van Effenterre, 2022) on maternal labor supply.

Another strand of this literature compares changes in student behaviors and outcomes between the school year and the summer break (see, for example, those studies cited in the Introduction on academic performance, mental health, and crime). Some papers in the children's sleep literature (see, for example, Hansen et al., 2005; Crowley et al., 2006; and Stewart, 2014) make this comparison to gauge how much sleep is lost when kids are in school.<sup>11</sup> In the childhood obesity literature, von Hippel and Workman (2016) show that for young children, obesity prevalence only rises over the summer break (as opposed to during the school year).

Regarding time use, Handwerker and Mason (2017) analyze several categories of parental behavior (with overlap to ours), focusing on mean differences between July (summer break) and October-April (school year). Notably, they find that parents are more likely to spend time with children during the school year, with generally larger effects for mothers. Though some changes are similar across parent gender, they also find statistically significant declines in sleep (15 minutes per day) and leisure (20 minutes) and an increase in work (33 minutes) for mothers but not fathers. Gershenson (2013) analyzes child activities and parent-child interactions

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<sup>11</sup> Hansen et al. (2005) compares average sleep for 37 high school students in August and September across the school start date. It is possible that other teenage sleep studies also make use of exact start and end dates.

in a regression framework and finds that some gaps between low- and high-income households grow over the summer (June-August): low-income children watch relatively more television, and their parents engage in relatively less facilitation of their activities, during the summer.

We contribute to this literature by using estimated school year start/end dates and introducing a regression discontinuity (RD) design to separate school-year effects from other seasonal factors that may conflate comparisons of summer and non-summer outcomes. We also provide a more comprehensive analysis of time-use changes by examining all reported activities grouped into ten main categories (which we detail below) as well as specific activities related to childcare. Lastly, we perform our analysis on not only mothers and fathers but also on older (ages 15-17) children; in the latter case, this allows us to analyze outcomes such as paid work time, total leisure, and screen time that appear to be novel to the school-year effects literature.

### **3. Data**

Our primary data source is the American Time Use Survey (ATUS). We use Multi-Year Microdata Files, obtained from The U.S. Bureau of Labor Statistics (U.S. Bureau of Labor Statistics, 2021). The ATUS is a 24-hour time diary, where the respondent reports the activities they were doing between 4:00am of the first day and 4:00am of the following day. Respondents are randomly sampled from individuals who completed the Current Population Survey (CPS), and they take the ATUS between two and five months after their final CPS interview. We make use of variables from both the ATUS and the final CPS interview. The ATUS contains information on where the respondent lives (where their household is). The state of residence is included for all respondents. County and/or CBSA are only observed for some individuals.

In general, we restrict the sample to use data from 2003-2019.<sup>12</sup> When we split by household income, we use data from 2010-2019 because the income variable is often missing (and not imputed) in prior years.<sup>13</sup> The ATUS contains over 400 activity codes. We collapse these codes into ten main categories: 1) sleep; 2) self-care; 3) household tasks; 4) caring for others; 5) work; 6) education; 7) free time; 8) eating; 9) exercise; and 10) travel. These categories are mutually exclusive and exclude a small amount of time with coding errors, etc. See the Data Appendix for which activities make up each category.

Our analysis relies on school start dates. We use school calendar information from [publicholidays.com](http://publicholidays.com), which was used in Jones and Karger (2023). These data contain school calendar information—school start date, summer start date, and various holidays—for over 11,000 US school districts. We focus on school start date and school end date for the 2019-2020 school year, which we use to proxy for such dates during the 2010-2019 school years as we discuss below.<sup>14</sup> Throughout the paper, we also refer to the school end date as the summer start date. In Appendix Figure A1, we show the distribution of school start week (Panel A) and summer start week (Panel B) that appear in our data.<sup>15</sup> Most districts start within a five-week period, and most districts end within a six-week period.”

We first add geographic information to the school calendar data. The only identifiers for the school calendar data are state and school district. After a small amount of data cleaning, we

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<sup>12</sup> While we use the “2003-2020 Multi-Year Microdata Files” version of this data, we do not consider 2020 to avoid complications from the Covid-19 pandemic. The overall ATUS response rate declined from about 58% in 2003 to 42% in 2019 (see Table 3.3 in <https://www.bls.gov/tus/atususersguide.pdf>). In Appendix Table A1, we show our results are robust to weighting our regressions using ATUS final sample weights, which ensure the data is nationally representative in a given year.

<sup>13</sup> See <https://www.bls.gov/tus/atususersguide.pdf>.

<sup>14</sup> It appears that 2020 summer start dates in our data correspond to the scheduled dates before Covid-19 affected school schedules.

<sup>15</sup> In these plots, we do not weight by student population and do not restrict to the districts that we will actually use in constructing our dataset. We also note that we do not use this temporal variation in our estimation strategy.

use these to match to NCES school district data that contain more detailed geographic information (including county and MCSA, which we use). Specifically, we first remove a number of generic terms such as “school,” “district,” and “public.” We do this so that the fuzzy matching can rely more on unique information. This results in 76% of the 11,245 school districts with a perfect match to a school district in the NCES data. We drop the less than 1% that are not matched at all. Among the matches, there is some degree of mismatching, but this appears to be relatively uncommon.<sup>16</sup>

After the matching, we aggregate school and summer dates to 1) the county level for the counties that appear in the ATUS data; 2) the CBSA level for the CBSAs that appear in the ATUS data, excluding the counties from step 1; and 3) the state level, excluding the counties and CBSAs in steps 1 and 2.<sup>17</sup> With each aggregation, we determine both the most commonly occurring school start week and summer start week, weighting by Common Core of Data district enrollment, obtained from Urban Institute (2023).<sup>18</sup> For instance, perhaps a county’s most commonly occurring school start week is week 32, and 90% of (enrollment-weighted) districts in that county started during this week. We do this because we do not observe an individual’s school district in the ATUS data, so we must assign school dates based on their county, CBSA, or state, as described next.

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<sup>16</sup> After removing the generic terms before matching, there are some cases of duplicate districts. For these, we revert to the district’s original name. At this point, we drop districts that do not match with any district in NCES. If a single district matches to multiple NCES districts, we keep only one observation and only if the county is constant across observations for that district. If there are multiple NCES districts with the same name in different counties, we drop matches to these districts. If a single NCES district matches to multiple school calendar districts, we drop these observations. Each of these cases are rare, though we certainly commit type I errors in a few cases (i.e., delete valid matches). Finally, we allow the NYC School District to take five observations, one for each of five counties.

<sup>17</sup> In uncommon cases in which there are no districts within a CBSA or state on which to match (after excluding districts at lower levels of geography), we use school calendar information after aggregating to the CBSA level without excluding any counties or after aggregating to the state level without excluding any CBSA’s or counties.

<sup>18</sup> Fewer than 1% of districts are coded as having 0 enrollment or are missing enrollment; for these cases, we replace enrollment with a value of “1.” It is also possible to weight by school (rather than district) enrollment. One reason to do this is that a school can be in a different county than its district. However, because this happens less than 4% of the time, this is unlikely to make much of a difference.

We add the school calendar information to each observation in the ATUS as follows. In general, it is best if we can use the dates which were aggregated to the county level because counties tend to be smaller than CBSAs (and thus the school calendar dates are better measured) and are never larger than the state they are in. As mentioned above, we only observe county for some individuals (from the most densely populated counties) in the ATUS. For these individuals, we use the most-commonly occurring school (and summer) start date for the county (accounting for school district enrollment); these make up 39% of the data (before sample restrictions).<sup>19</sup> We then match the CBSA-level dates for individuals for whom we observe CBSA but not county; these make up 30% of the data.<sup>20</sup> For remaining individuals, we use dates aggregated to the state level; these make up 31% of the data. Appendix Figure A2 shows what percentage of the school districts we observe share the same school and summer start dates within each county, CBSA, and state. As expected, a greater percentage of counties have districts that all share the same start dates than is true of CBSA's (and of CBSA's compared with states). Even still, the average percentage of districts that share the same school start date within a state is 69% (62% for summer start date). Corresponding percentages at the CBSA level are 76% (71%) and at the county level are 81% (81%).

There are several potential sources of measurement error corresponding to the school calendar information. First, the school calendar information corresponds to the 2019-2020 school year, but we use time use data going back to 2003. School districts might change their start week over time. Second, to calculate week of the year, we code week 1 as January 1-7, week 2 as January 8-14, and so on; because years start on different days of the week, a given week means something slightly different across years. Third, because we do not observe school district in the

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<sup>19</sup> This is assuming the school district file also has data for that county.

<sup>20</sup> Because CBSAs can overlap states, when working with CBSA data, we do so at the state-CBSA level.

ATUS (or whether respondents or their children attend public schools), we cannot match precisely to the school district the respondent lives in, so we rely on the method described above. Finally, while we do observe a large percentage of school districts, we do not observe them all. For these reasons, we expect some amount of classical measurement error (leading to attenuation bias) in our estimates. We implement a donut-hole RD design where we leave out some days or even weeks just before and after school start/end dates. This should purge measurement error within several days of measured school start/end dates, though of course it could also change the results by changing the regression sample. To gauge how much measurement error might be affecting our results, we increase the size of the donut hole by 1-2 weeks on either side of the school start/end week, which we justify later in the paper using data on historical school start/end dates for some states. In general, we find similar results to our baseline results.

Across all samples, we exclude holidays and individuals employed in elementary and secondary schools (as of the last CPS interview), since their schedules are mechanically affected by school and summer start dates (Price and Wasserman, 2022).<sup>21</sup> This yields 197,130 observations. We consider two age groups: 25-55 year olds (many of whom are parents) and 15-17 year olds (many of whom are students). After restricting on age, there are 108,551 25-55 year old respondents and 8,561 15-17 year old respondents. Depending on the sample, we also limit based on one or more of the following criteria: by weekday/weekend; by gender; by whether there is at least one own child of school age in the household; by family income (as of the last CPS interview); and by employment status (as of the last CPS interview). These restrictions tend

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<sup>21</sup> We also drop the very small number of observations (less than 0.1%) that are in the control (summer) group for one cutoff, but are in the treated (school year) group for the other cutoff. This can happen if the summer break is very short.

to greatly reduce sample sizes.<sup>22</sup> For instance, there are 14,103 (10,146) weekday observations for mothers (fathers) with at least one household child age 6 through 17; some of these observations will not enter our regression discontinuity sample due to being too far away from a cutoff.

#### 4. Empirical Strategy

We use a regression discontinuity design (RDD) to explore the effects of being in school versus out of school on our constructed time categories for adults and 15-17 year-olds. This strategy follows Benson, Fitzpatrick, and Bondurant (2022) and Jones and Karger (2023). We present results both in regression form and graphically. For the regressions, we estimate the following equation around the school start date:

$$y_i = \alpha + \beta \cdot f(days_i) + \gamma \cdot \mathbf{1}(days_i > cutoff) + X_i\beta + \epsilon_i, \text{ with } |days_i| \leq k \quad (1)$$

where, for individual  $i$ ,  $y$  is hours spent in a particular time category (such as exercise or sleep); the running variable  $days$  is days relative to the Wednesday of the first week of school (which is the *cutoff* date);  $f(days)$  is a linear function of the running variable, which we allow to vary on either side of the cutoff;  $\mathbf{1}(days > cutoff)$  is an indicator for being over the cutoff; and  $X$  is a vector of day of week fixed effects and control variables (metropolitan status, highest level of education attained, Hispanic, race, age, and, where applicable, sex).<sup>23</sup> Because schools start (end) on different days of the week, we estimate a donut hole regression in that we exclude all days in the school start (end) week (in a later robustness check, we expand the size of the donut hole). Instead of clustering at the level of the running variable, we use robust standard errors, which

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<sup>22</sup> In Appendix Tables A2 through A4, we present summary statistics for weekday observations for women, men, and children, respectively. The tables demonstrate how the number of observations and the average value of several variables change as we make sample restrictions. The average values are generally similar across columns. One exception is that men in the analysis sample are somewhat more likely to be White and somewhat less likely to be Black.

<sup>23</sup> Metropolitan status, education, Hispanic, and race are from the CPS, while age and sex are from the roster file.

Kolesár and Rothe (2018) argue is more appropriate for a situation with relatively few discrete values of the running variable.<sup>24</sup>

We focus on a “stacked” version of our data in which we analyze both school year start (summer end) and school year end (summer start) dates simultaneously.<sup>25</sup> In order for the coefficients to have similar interpretations across cutoffs, we code the *days* variable such that negative values correspond to summer days and positive values correspond to school days. For the end of summer/start of school cutoff, *days* is negative for the end of the summer and positive for the start of the school year. In contrast, for the end of the school year/start of summer cutoff, *days* is positive for the end of the school year and negative for the start of the summer. Thus, a positive value of our coefficient of interest,  $\gamma$ , corresponds to an increase in time usage in the school year relative to the summer.

An example may help illustrate this procedure. Suppose that the first day of school falls during the week of August 19-25, 2019. All days during that week are excluded from the analysis. Then *days* would take a value of “0” on the Wednesday of this week, or August 21<sup>st</sup>, a value of “1” on August 22<sup>nd</sup>, and a value of “2” on August 23<sup>rd</sup>, etc. while it would take a value of “-1” on August 20<sup>th</sup>, “-2” on August 19<sup>th</sup>, etc. Days -2 though 4 would be excluded from the

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<sup>24</sup> We compared the standard errors (which we compute with OLS and robust standard errors) for Panel A of Table 2 to alternative choices. The standard errors we compute are nearly identical to the standard errors associated with conventional point estimates obtained using nearest neighbor clustering in the “rdrobust” Stata package (Calonico et al., 2017) (with the “vce(nn)” option and uniform kernel; the “vce(hc0)” option also produces very similar results). Our standard errors are sometimes smaller and sometimes larger than those obtain using rdrobust when clustering at the level of the running variable. Our standard errors are about 5-10% smaller than rdrobust with a triangular kernel, which also produces different point estimates. Our standard errors are also smaller than (about 55-60% as large as) rdrobust using the “robust” method, which reports bias-corrected point estimates (which differ from the conventional estimates), with standard errors computed using a robust variance estimator. Finally, Kolesár and Rothe (2018) recommend an approach implemented in the “rdhonest” package (see also Armstrong and Kolesár, 2020); they recommend this over the robust standard errors that we use. The rdhonest approach yields standard errors approximately 2.5 to 5 times larger than ours (in this rdhonest comparison, all is not equal, e.g., no covariates are included); using these would lead us to detect few effects given the very large confidence intervals they produce.

<sup>25</sup> We include the separate school-year start and school-year end results in Web Appendix Tables W1-W12. In the stacked version, an observation can enter the sample as a control (summer) observation twice if it is within the bandwidth for both cutoffs.



regression. Similarly, if June 3-7, 2019, is the last week of school, *days* would take a value of “0” on Wednesday, June 5th, a value of “1” on June 4<sup>th</sup>, and a value of “2” on June 3<sup>rd</sup>, etc., while it would take a value of “-1” on June 6th, “-2” on June 7th, etc.

We estimate Equation (1) on a pre-defined subset of our data surrounding school year start and end dates (the “bandwidth” in our RD design). One shortcoming of our paper is our limited sample size, leading us to use of a bandwidth of 9 weeks (65-67 days) on either side of school cutoff dates to increase statistical power. In general, if we were to use an “optimal” bandwidth as selected by recently developed diagnostic procedures, we would be left with standard errors too large to detect effects.<sup>26</sup> However, for our baseline table we test sensitivity to using smaller bandwidths and generally find similar results until the bandwidth is reduced to about 2-4 weeks, as we discuss later.

In Appendix Figure A3, we present density plots (binned at the weekly level) for our four main samples. Statistical tests of the density around the school start/end date cutoffs do not yield evidence that there are differences in survey response rates across the cutoffs, with p-values ranging from 0.31 to 0.77.<sup>27</sup>

## 5. Results

### *5.1 Effects on specific categories related to parent time with children*

We first consider outcomes that are directly related to time spent with children for mothers and fathers of 6–17-year-old household children in Table 1 (with corresponding plots in Figure 2). This is to verify that our estimation routine picks up changes in behavior that are most

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<sup>26</sup> Using the “rdbwselect” command from the “rdrobust” package in Stata, coupled with the “mserd” optimal bandwidth (and vce(hc0) option with a uniform kernel; as Footnote 24 states, this yields slightly smaller standard errors than in the OLS regression we use), for the baseline mother weekday sample (Panel A of Table 3), we would be left with a bandwidth between 9 and 19 days.

<sup>27</sup> We obtain these p-values using the “rddensity” Stata package (Cattaneo, Jansson, and Ma, 2018).

obviously related to the school year for parents. In this table, we focus on weekdays, as we expect differences between the school year and summer break to be largest on such days. We present results for mothers in Panel A and fathers in Panel B. Means of the dependent variables on summer days (“Y means”) are given below the regression coefficient and standard error estimates. The first column is a measure of all time spent in the presence of one’s own household children; this category includes both activities directly involving the children as well as other activities in which the children were simply present. For women, we find a decrease of 0.55 hours, or 33 minutes, in this variable on school days compared to the summer. For fathers, there is a 43-minute decrease in time spent with children on days during the school year. Given that the mean amount of time in the presence of own children is over two hours less for fathers than mothers in general, this represents a substantial relative decrease in time fathers spend with their children—i.e. father-child time drops by about 20% versus a more modest drop of about 10% in mother-child time. The second column measures time spent in secondary childcare, which is taking care of children under age 13 while engaged in another (primary) activity. For both mothers and fathers, there is much less secondary childcare during the school year (by an hour or more per day), presumably because most children are in school during weekdays of the school year.

The first two columns in Table 1 show that parents are present with their children less often during the school year, which is very likely a mechanical result of children attending school for a large part of the day. The remaining columns consider time parents spend in primary activities that are focused on children. For the most part, we see that participation in these activities *rises* for parents during the school year. As seen in column 3, when school is in session, total time in primary activities (which is the sum of the variables in the final three columns) with

children increases by 36 minutes per weekday for mothers; the corresponding effect for fathers is 11 minutes; this effect is statistically different (at the 1% level) for fathers compared to mothers.<sup>28</sup>

Not surprisingly, as part of the increase in total primary activities with children, there is a large (as a percentage of the mean) increase in helping children with educational pursuits (i.e., homework) in column 4 and a smaller increase in driving children around (column 5) when school is in session. In both cases, the effects are at least twice as large for mothers as they are for fathers, which is consistent with previous work (e.g., Del Boca, Flinn, and Wiswall, 2014) showing women spend more time helping their children with school-related tasks. In the last column (6) of the table, we see that other primary activities with children that are neither 1) helping with homework, nor 2) driving children around, also increase during the school year for mothers but not for fathers.<sup>29</sup>

### *5.2 Effects on general time use categories (adults)*

We now turn our attention to analyzing a broad set of time categories to gain insight into how different individuals in the household change their time allocations around the school calendar. Table 2 presents the baseline RDD results for the ten main time use categories we consider (see Appendix Figures A4 through A7 for plots).<sup>30</sup> Panel A focuses on mothers with at least one school-age (6-17 years old) child in the household. We find that relative to the summer,

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<sup>28</sup> In Web Appendix Table W13, we consider how time-with-children effects of the school year varies by whether there is a pre-school age (0-5) child in the home (in addition to any school-age children). For mothers, coefficients on simply being in the presence of any children and providing secondary childcare are, not surprisingly, much larger in magnitude when there are no pre-school age children in the home. Effects on active time with children are larger with pre-school age children present, however. For fathers, effects on all categories of time with children are generally similar regardless of the presence of pre-school age children in the home.

<sup>29</sup> When we examine how time spent doing homework changes for 15-17 year-olds around school year cutoff dates, we find that they spend more than three-quarters of an hour more (0.81, s.e.=0.09) per weekday on these tasks when school is in. Time spent doing homework during the summer break is nearly zero (0.12 hours), on average.

<sup>30</sup> As a robustness check to Table 2, we (probability) weight using the “ATUS final weight” variable and report results in Appendix Table A1. Results are generally very similar to those in Table 2.

this group spends 0.43 hours less on sleep and 0.41 hours less on free time during the school year. On the other hand, they spend 0.59 hours more on caring for others, with no statistically significant increase in time spent on work.<sup>31</sup> We also find smaller decreases in eating time and exercise, with only suggestive evidence for any increase in travel time.

As a kind of placebo test, Panel B limits the sample to women who do not have school-age children in the household or children who are most likely to go to daycare or pre-kindergarten; in other words, they do not have children ages 3-18 in the household. Noting slightly larger standard errors compared to the first panel, we find only one statistically significant effect at the 10% level (caring for others); furthermore, effects on all ten categories are smaller in magnitude than they are for the treatment group (usually substantially so). In the cases of sleep, caring for others, and free time, the effects are statistically distinguishable (at the 5%, 1%, and 5% level, respectively) from those for women with school-age children (if we run a difference-in-RDD regression—see Web Appendix Table W14—we also find that effects for work, eating, exercise, and travel time are statistically different for the two groups).<sup>32</sup>

Panel C of Table 2 considers fathers with at least one school-age child in the household. Effects on free time and exercise are roughly similar in magnitude to those for mothers, though only the former is statistically significant for fathers. Effects on sleep and caring for others are much smaller than the corresponding effects for mothers (these effects are also statistically different across gender at the 10% and 1% level, respectively). Notably, the effect of the school year on work time is positive for fathers (at 35 minutes per day) and larger than it is for

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<sup>31</sup> The ATUS diaries are coded between 4am of the main day and 4am of the following day. For example, sleep on Friday includes Friday morning 4 a.m. and on and Friday night/early Saturday morning until 4a.m. If people go to bed later on Friday night than they would on, say, Thursday night, this will affect the value of the sleep variable on Friday.

<sup>32</sup> In this difference-in-RDD regression, we allow the slope to vary on either side of the cutoff, but not separately by group (mothers with school-age children vs. mothers with no children 3-18).

mothers—this is the only case in which the magnitude of the school year effect is larger for fathers (though the difference in the coefficients across gender falls short of statistical significance).

One possible interpretation of the results is that when school is in, mothers increase the time they spend caring for others by about the same amount that fathers increase their work time. This means that gender gaps in these variables are larger during the school year than they are during the summer.<sup>33</sup> The contrast in the results between mothers and fathers suggests that the effects on the mothers are not merely a result of a discontinuity in the likelihood families take vacations together around school year and summer start dates (later, we also show that our results are generally robust to increasing the “donut hole,” or removing more weeks closest to school cutoff dates, in our RD regressions).

### *5.3 Effects on general time use categories (teenage children)*

We consider students (children ages 15-17) in Panel D of Table 2 and find strong effects on all but two of the outcomes. Not surprisingly, there is a large increase—of around five and a half hours—in education activities in the school year compared to the summer. There is also a small increase in self-care of about 10 minutes. Which activities offset these education hours? Students spend 2 fewer hours on free time, 1.3 fewer hours sleeping, 0.8 fewer hours working, and 0.7 fewer hours on household tasks. In addition, they report 0.6 fewer hours on exercise, though this is likely an overestimate given that time spent in gym class is counted as education time, not as exercise, in ATUS (after-school activities during the school year such as sports are not coded as education time, however).<sup>34</sup> In Appendix Table A5, we recreate this panel, but split

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<sup>33</sup> This is true because the baseline mean for caring for others (work) in the summer is higher for women (men).

<sup>34</sup> This point – that all time in school is coded as education—could also affect other activities that might occur during the school day, such as eating or some of the subcategories that are part of free time.

by gender. Self-care and caring for others are statistically significant for girls, but not for boys; self-care is statistically different across genders at the 10% level. Exercise is also statistically different across genders, with boys seeing a decrease of 0.5 hours more than girls during the school year versus summer (note, however, that the effects are much more similar as a percentage of their respective summer means, since boys report roughly twice as much summer exercise as girls do).

Motivated by the importance of sleep to teenage health, we present additional results for 15-17 year olds. In Figure 3, we show the percentage of children ages 15-17 who are asleep at every minute of the day (between 4am and 3:59am the following day, which is how the time diary is constructed).<sup>35</sup> We consider weekdays (from Monday at 4 am to Friday at 11:59 am) during our baseline RDD sample time frame. The summer is shown as the solid red line and the school year is shown as the dashed black line. Compared to the school year, 15-17 year wake up much later in the summer. They also go to bed later, but later bedtimes do not fully offset later wake times. As a result, teenagers get less sleep in total during the school year, which is consistent with the RD result in Table 2. The finding that teenagers sleep more during the summer has been used to motivate pushing back high-school start times since sleep has been linked to better performance in school (see, for example, Heissel and Norris, 2018 and Groen and Pabilonia, 2019).

#### *5.4 Comparison with mean differences from standard OLS regressions*

Appendix Tables A6 and A7 mirror Tables 1 and 2, respectively, but they contain estimates from OLS regressions in which time use during months of the year in which we believe most public schools are in session—September 16-30, October, November 1-15, January 16-31,

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<sup>35</sup> We follow Handwerker and Mason (2017) in making this style of graph.

February, March, and April— is compared to time use in July, when most schools are out for summer break.<sup>36</sup> In other words, these seasonal estimates do not make use of changes in time use on either side of estimated school start/end dates (as our RD design does) but rather simply compare means during the school year to the summer mean. The set of the control variables used in these regressions is the same as in Equation (1).

For the most part, the results in Appendix Tables A6 and A7 are broadly similar to their counterparts in Tables 1 and 2, though there are exceptions, some of which we detail. For mothers, OLS coefficients in Tables A6 and A7 modestly understate the magnitude of school-year effects on total and other activities with kids, sleep, caring for others, and free time while overstating the effect on the time in the presence of kids and work time. For fathers, the OLS coefficients overstate the effect on exercise and caring for others while understating effects on time in the presence of kids, secondary childcare, sleep, work, and free time; in addition, the differences are more severe than those for mothers in several cases.

Despite these differences, the two types of analysis—our RD design and simple OLS regression—yield largely similar results. How can this be explained? One possibility is that because our baseline bandwidth in our RD regressions is fairly large, we are picking up differences that are not in fact due to the discontinuous change from school being in session to school being out. However, when we examine how our results change when shrinking the bandwidth (Appendix Tables A8-A11), we see the estimated coefficients are largely similar—especially for those effects that are largest and most precisely estimated in Table 2—down to a bandwidth of 2-3 weeks, though there is a loss of power in some cases (this is especially true for men), and magnitudes tend to shrink for the 15-17 year old sample.

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<sup>36</sup> We erred on the side of being conservative with our school vs. summer month selections.

We believe a more plausible reason for the similarity in RD and OLS results stems from the pattern in time use changes at the start or end of the school year. Indeed, an examination of Appendix Figures A4 through A7 suggests that for time-use variables that are most affected by the school year in our RD regression analysis (Tables 1 and 2), effects of the school year (or, equivalently, the summer break) are fairly immediate and do not vary a great deal after that point. This is consistent with a difference in (regression-adjusted) means mimicking the RD estimates, though of course that need not have been true *a priori*.

### *5.5 Extensive margin and weekend effects*

We also examine each of the 10 time-use categories from Table 2 at the extensive margin (i.e., whether the activity occurs at all in a given diary day). The results are contained in Appendix Table A12. Because many activities take place for at least one minute on a given day for nearly everyone, it is unsurprising that effects of the school calendar on those activities is zero or very small (e.g., with respect to sleep). A few findings are notable: both mothers and fathers of school-age children see a significant increase in the probability of caring for others on school days (of 16 and 14 percentage points, respectively) and a smaller increase in the probability of working a positive amount (of 4 percentage points for men). Men see a significant decline in the likelihood of exercise (4 percentage points). Women have a higher likelihood of traveling (by 3 percentage points). For teenage children, a larger number of extensive margin effects are significant, with, for example, a 9-percentage point decline in the probability of exercise during the school year, a 13-percentage point increase in engaging in self-care, a 17-percentage point decrease in the probability of doing household tasks, and a 10-percentage point decline in the probability of working.



In Table 3, we recreate Table 2 but consider weekends instead of weekdays. One of the main insights we glean from this is that for most behaviors for which we find school calendar effects on weekdays, there are no offsetting effects on weekends. In the cases of caring for others and exercise, we actually find that those activities follow the same pattern with respect to the school calendar on weekends as they do on weekdays, and this is true for both men and women. On the other hand, there is offsetting behavior for time spent traveling: on weekends during the school year, mothers (fathers) with school-age children travel 0.15 (0.17) hours less than on weekends during the summer break.<sup>37</sup> We additionally find that women decrease their amount of work on weekends in the school year. Teenage children see almost no school-year effects on weekends except that they spend 35 minutes more on educational activities on weekends when school is in session (which includes 32 additional minutes on homework specifically).<sup>38</sup> Importantly, we do not see evidence that teenagers “catch up” on their sleep on weekends when school is in session (relative to when school is out) to offset the effects of sleeping significantly less on weekdays during the school year compared to summer-break weekdays.

How does the school year change total time allocations over the course of the entire week? In Web Appendix Tables W15 and W16, we recreate Tables 1 and 2 for the entire week (with weekdays and weekends weighted appropriately) instead of weekdays or weekends separately. Not surprisingly given the much stronger effects of school dates on weekday time allocations (as already discussed), we find results on full-week time allocations that are mostly qualitatively similar but generally somewhat dampened compared to those in Tables 1 and 2.

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<sup>37</sup> In Table 2, exercise is not statistically significant for men, and travel is not statistically significant for either men or women.

<sup>38</sup> In results not shown, we find a 32-minute increase in homework time (defined as the sum of “Research/homework for class for degree, certification, or licensure”; “Research/homework for class for personal interest”; “Waiting associated with research/homework”; and “Research/homework, not elsewhere classified,” with the majority of time in this summary measure being comprised of the first category.

This reinforces the fact that the school year does not merely shift time allocations between weekdays and weekends—in general, we find that total time use over the full week changes for families depending on whether school is in session.

### *5.6 Heterogeneity (mothers of school-aged children)*

Table 4 provides a comparative analysis of the effects of the school calendar on maternal weekday time use by age group of children in the home. We present changes in time use among mothers of younger children, who have at least one child between the ages of 6 and 11 and no older children between the ages of 12 and 17, in Panel A. In panel B, we report changes in time use for mothers of older school aged children (12-17 years old, with no children 6-11 years old). We find strong evidence that the differences we observe in Table 2 Panel A are being driven primarily by those in households with younger children.<sup>39</sup> Across each of sleep, caring, free time, and exercise, the changes in time use that attend school being in session are much more pronounced among mothers with younger children, as might be expected.<sup>40</sup> For example, mothers of 6-11 year-olds get 37 fewer minutes of sleep when school is in session, while we do not find evidence that mothers of older children aged 12-17 lose any sleep at all. Likewise, the increase in the amount of time spent in caring activities is four times larger among mothers of younger kids than it is for mothers of older kids (52 minutes versus 13 minutes, respectively). It also appears that effects of the school calendar on exercise and travel time use are driven by those with younger school-aged kids.

In Table 5, we split the sample by employment status and household income, focusing only on women with school-age children, the adult group for which we see the largest and most consistent effects across outcomes. Panel A considers weekday time use among women who

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<sup>39</sup> In making this statement, we note that this table does not consider those with children in both age ranges.

<sup>40</sup> The differences in sleep and caring for others are statistically different across the two groups.

were not employed as of their last CPS interview, while Panel B considers those who were employed at that time.<sup>41</sup> Both groups see decreases in sleep and free time and increases in caring for others during the school year, though the effects are larger for non-working mothers (sleep and caring for others are statistically different across groups). One notable difference is that women who are employed increase their working time during the school year by 0.29 hours compared to a decrease of 0.33 hours for those who were not employed as of the last CPS interview, though only the latter coefficient is statistically significant. Women who were employed are also the only ones to see a significant decrease in exercise (of 7 minutes). In contrast, women who were employed increase their travel time more than not-employed women, while not-employed women increase their time on household tasks by over half an hour but employed women do not exhibit a change.

Panels C and D of Table 5 consider women below and above \$50,000 household income (as of the last CPS interview). Strikingly, for most outcomes, school-year effects are broadly similar in magnitude across our income threshold;<sup>42</sup> however, higher-income women are the only ones to change time spent exercising around school start/end dates (this is the only difference that is statistically significant across income groups).<sup>43</sup>

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<sup>41</sup> We consider “Employed - at work” and “Employed – absent” as of the last CPS interview to be “employed”. We consider the other categories—“Unemployed - on layoff”, “Unemployed – looking”, “Not in labor force – retired”, “Not in labor force – disabled”, and “Not in labor force – other”—to be unemployed. We note that the month of the year that we observe employment depends on when individuals were in the CPS rotation, which means that our measure of employment is subject to seasonality concerns. However, given that we do not find an effect of the school year on the extensive margin of work (employment) among the full sample of mothers in our sample (Appendix Table A12), we do not think this will greatly affect the results.

<sup>42</sup> Sleep and eating time are statistically significant for higher-income women only.

<sup>43</sup> In Appendix Table A13, we show results for Table 1 split by employment status and income. Women who were not employed as of the last CPS interview have larger (in magnitude) changes for all outcomes besides time in the presence of household children (column 1). In most cases, there are smaller differences across the income gradient. All coefficients but the first are statistically different between Panels A and B. None are statistically different between Panels C and D, though we again note the smaller sample size due to missing income information before 2010.

In Appendix Table A14, we split the women with school-age children sample by marital status<sup>44</sup> with the thought that married women might have more ability to respond to the shock of the start/end of the school year by sharing tasks with their spouse. While there are differences in some cases, they are generally small.

In Appendix Table A15, we delve further into the free time results for women with school-age children, with a focus on the presence of others in each activity. This is to get a sense of how “social time” changes for mothers around the academic year. We take advantage of the fact that, for most activities, ATUS respondents are asked who they were with during the activity. The first column of Panel A shows that there is an increase in time spent on all activities for which the *Who were you with?* question was asked; this excludes things such as sleep. The second column shows that there is a 0.4 hour reduction in free time of any kind; this reproduces the relevant column of Panel A of Table 2. The remaining columns are mutually exclusive subcategories of free time.<sup>45</sup> We detect a decrease in screen time, socializing, and attending arts events when the school year is in session, with an increase in volunteer work. The remaining panels restrict to activities for which one was with other adults (Panel B), with children (Panel C), and alone (Panel D).<sup>46</sup> Panels B and C are not mutually exclusive as an activity can include multiple people. In Panel B, we see a decrease in time spent socializing with adults and attending arts events, with an increase in time spent volunteering. In Panel C, we document large (relative

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<sup>44</sup> Married includes “Married - spouse absent” and “Married - spouse present.” Unmarried includes “Widowed,” “Divorced,” “Separated,” and “Never Married.” This variable is measured at the last CPS interview.

<sup>45</sup> See the table notes for details on how we construct these categories.

<sup>46</sup> We categorize as follows: Panel B (with adults): spouse, unmarried partner, parent, brother/sister, other related person, housemate/roommate, roomer/boarder, other nonrelative, parents (not living in household), other non-household family members 18 and older (including parents-in-law), friends, co-workers/colleagues/clients, neighbors/acquaintances, other non-household adults 18 and older, boss or manager, people whom I supervise, co-workers, and customers. Panel C (with children): own household child, grandchild, foster child, own non-household child < 18, other non-household family members < 18, and other non-household children < 18. Panel D (alone): alone.

to the mean) decreases in time spent with children in overall free time, screen time, other relaxing time, time spent socializing, and time spent attending arts events. We again see an increase in volunteering time. Finally, we observe much weaker results for free time spent alone in Panel D.

In Appendix Table A16, we conduct a similar analysis, with a focus on time spent specifically with one's partner or spouse.<sup>47</sup> In Panel A, we do not restrict the sample to those who are married, while in Panel B we do. We detect a decrease in time spent on the telephone (in both panels) and overall time and free time (in Panel B) during the school year, but no other effects are significant at conventional levels.

### *5.7 Robustness*

As discussed in Section 5.4, in Appendix Tables A8-A11, we consider how changing the bandwidth associated with our RD estimation procedure affects the results (for weekdays). In Appendix Table A8, we again study women with school-age children, finding that school-year effects for sleep, caring for others, and free time are robust to shrinking the bandwidth all the way down to 2-3 weeks before and after school/summer start dates. Effects on eating and exercise remain statistically significant at conventional levels down through 5 weeks. For most variables, we find qualitatively similar results up to about 4-5 weeks, and sometimes beyond that. With some exceptions, point estimates are also generally stable to about 3-4 weeks.

In Appendix Table A9, we see that the vast majority of estimates remain small and statistically insignificant for women with no children aged 3-18 in the household. Results for men with school-age children are shown in Appendix Table A10, where effects on sleep and free

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<sup>47</sup> We include spouses and unmarried partners when making this category.

time, for which we find statistically significant effects at our baseline bandwidth of 9 weeks, are less robust to a shrinking bandwidth than they are for women. This further underscores our conclusion that women's behavior is more affected by the school calendar than is men's. Lastly, in Appendix Table A11, we see that effects for teenage children are also generally robust down to bandwidths of 3-5 weeks, though the magnitudes of the coefficients usually shrink somewhat as the bandwidth becomes tighter. Overall, we view the results in these tables as lending credibility to our (baseline) identification strategy.

We also consider how varying the choice of the donut hole affects results. This is for two main reasons: first, due to the issues discussed in Section 3, i.e., because we are only able to measure school year start/end dates at the end of our sample, there is likely to be some measurement error in exact dates going back in time. To the extent that dates vary within a few calendar weeks over time, increasing the donut hole eliminates this source of measurement error. Second, the few weeks immediately preceding the summer break or start of the school year may be somewhat atypical for families (relative to other school weeks and summer weeks, respectively), and increasing the donut hole leaves these weeks out of the analysis. In Appendix Tables A17-A20, we present results similar to Table 2 but allow the size of the donut hole to vary. We first show the baseline results, then allow the donut hole to exclude one week on either side of the first week of school/first week of summer. We then exclude two weeks on either side of the relevant cutoff. For the most part, results are robust to this test. One notable exception is that women's work becomes marginally statistically significant if we exclude the two weeks on either side of the relevant cutoff.

We next probe how informative the aforementioned donut hole regression robustness check is by comparing, for a subset of districts, the 2019-2020 district start and end dates that we

use throughout the paper to district start and end dates going back in time. We were able to collect data on historical school start and end dates from the years 2003 to 2015 from other researchers who made public records requests of individual states to obtain dates for each school district within the state. Many states did not respond to their requests, but some did, and we use data from 17 states and Washington, D.C. that provided either start or both start/end dates for at least one of the years in the 2003-2014 window.<sup>48</sup> After matching across datasets (68% match rate), we are able to examine how much school start dates vary by district relative to the year we measure these dates (2019-2020).<sup>49</sup> These results are contained in Appendix Table A21, and we believe they provide substantial support for our donut-hole robustness checks—across years, roughly 90-95% of school/summer start weeks are within one week of our measured (2019-2020) start weeks and 98-100% are within 2 weeks.

To further address the school calendar mismeasurement issue, in Appendix Table A22, we reproduce Table 2, but restrict to observations for which at least 90% of school districts (after weighting by student population) in the relevant unit of geography (county, CBSA, or state) share the same school start (or end) date; in other words, we use only the observations whose relevant school start or end date consistency has a value of 0.9 or above (as seen in Appendix Figure A2). While measurement issues still exist (for example, dates can change going back in time, and we do not always observe all school districts in a geographical area), we believe that this restriction should reduce measurement error. The tradeoff is that this causes the sample size

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<sup>48</sup> The list of states we consider is contained in the notes of Appendix Table A21. Most states provided data in Excel. We did not consider two additional states that provided PDFs, one state that provided a Word file, and one state that provided codes instead of district names.

<sup>49</sup> In rare cases where data were provided at the school (as opposed to district) level and schools did not have the same start (end) date, we aggregated by taking the mean date. After cleaning, we match by state and district name from the historical data to the 2019-2020 calendar data. While this process is imperfect, it appears to have performed well. We matched 68% of districts in the historical data to the recent data; nonmatches can occur for different reasons, including districts in the historical data not being present in the 2019-2020 data and our requirement of a high match probability to be included in the data.

to shrink to approximately one-third of the size it is in our baseline analysis. This leads to standard errors that tend to be a little less than twice as large. In Panel A, which considers women with school-age children, sleep, caring for others, and exercise continue to be statistically significant, while free time and eating do not. Nothing is statistically significant for women with no school age children (Panel B), and only caring for others is significant for men with school-age children in Panel C. Five of the eight previously significant coefficients for teenagers (Panel D) remain so after the sample restriction. The coefficients for mothers and teenagers are qualitatively very similar to the baseline estimates in Table 2 but change a bit more substantially in a few cases for fathers. We view these results as weakly supportive of our main results, though it is important to keep the larger standard errors in mind when making conclusions.

### *5.8 Effects on teenagers' free time behaviors*

Other than educational activities, the largest change in teenagers' time use when school lets out or resumes is in the amount of free time they have. This leads us to ask how teenagers are spending such time. We focus specifically on time in front of screens: video games, television, and computer use for leisure (not schoolwork or work).<sup>50 51</sup> This focus is due to the attention these activities have received in the literature. Video games and screen time have been linked to both negative and positive effects where, on the one hand, video games can improve cognitive function, and, on the other, some papers raise concerns that they are associated with increased mental and physical health risks for youths and young adults (see Granic et al., 2014, for a review).

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<sup>50</sup> The activities coded under this category include use of internet and social media. Though it is not specified, it would thus appear that time spent in these activities on smartphones would fall under the same category.

<sup>51</sup> The variable we use to measure video game time is technically time spent in games (not just video games); in doing so, we follow Kimbrough (2020), who argues that most of this time is indeed video gaming.



The results for these “screen time” behaviors are contained in Panel A of Table 6. We find that all three activities decrease during the school year relative to the summer break, with the effect on television being strongest in terms of raw time. In total, the time spent on these activities falls by almost 1.5 hours when school is in session, which is about 70% of the total decline in free time seen in Table 2. Thus, after sleep, the next biggest change in student summertime use is on (leisure) time in front of screens. There is rising concern over increasing media use among teenagers that was accelerated by the COVID-19 pandemic.<sup>52</sup> To the extent that such consumption is habit-forming or addictive (see Seema et al., 2022), our results suggest summer may be a particularly vulnerable time for teens. In Panel B of Table 6, we additionally consider telephone use, which can include texting.<sup>53</sup> We do not detect a change in telephone use around school start/end dates.

## 6. Conclusion

This paper provides a comprehensive look at how parents and children adjust their time use around the academic calendar. By exploiting location-specific information on school year start and end dates and using regression discontinuity methods, we show that mothers of school-age children and 15-17 year-olds (the vast majority of whom are high-school students) make substantial changes to their schedules depending on whether school is in session or not. Some of these changes are natural and even obvious: for example, mothers spend less time helping children with schoolwork during the summer, and 15-17 year-olds spend much less time on educational activities during that time. Other results, however, are more subtle and have

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<sup>52</sup> For example, see <https://www.common sense media.org/press-releases/two-years-into-the-pandemic-media-use-has-increased-17-among-tweens-and-teens>.

<sup>53</sup> We use categories t160101 through t169989 (see Data Appendix). The ATUS Coding Lexicon includes “texting with a friend” as an example of “Telephone calls to/from friends, neighbors, or acquaintances” starting in 2011. <https://www.bls.gov/tus/lexicons/lexiconwex2011.pdf>. We do not include t150104 (volunteer telephone use) when constructing the variable.

important implications for mothers' and teenagers' health: for example, both groups sleep and exercise less when school is in session (with larger effects for mothers of younger children and for teens).

Mothers spend more time caring for others during the school year. Fathers also do, but the change is smaller, which is another indication that the burden of childcare tasks falls disproportionately on women. This burden appears to rise during the school year even though parents generally spend less time with their kids (due to their being in school). This may have implications for mothers' health in the short and long run. There is a well-known gender gap in mental health measures including depression and anxiety (Churchill et al., 2020; Golin, 2022), but little is known about how this gap varies seasonally or, more particularly, with whether an individual has children in school. Our results suggest that women with school-age children change their behavior more during the school year than similarly situated men, with larger (in magnitude) losses in sleep, free time, and exercise and increases in time spent caring for and driving with children (but a smaller change in work time). Some of these factors may contribute to relatively poorer mental health of mothers when school is in session.<sup>54</sup> Because our data cannot directly address this possibility, it is an important topic for future research.

Regarding teenagers, we also find reasons why their mental health may suffer during the school year relative to summer break. Chief among these is our estimate that they sleep over an additional hour per day when school is out. There is strong seasonality in teenage mental healthcare visits with visits falling in the summer (Zhang et al., 2021), and previous studies have linked school breaks with a reduction in youth suicides (Hansen and Lang, 2011; Hansen, Sabia,

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<sup>54</sup> As it happens, women are four times more likely to experience Seasonal Affective Disorder (SAD) than men are: see <https://www.womenshealth.gov/blog/seasonal-affective-disorder-spotlight#:~:text=According%20to%20the%20National%20Institute,often%20in%20women%20than%20men>.

and Schaller, 2022). Though many factors change when school is out (such as the incidence of bullying), our results suggest that the way teens use their time may contribute to these trends.

Though teens spend the time they save while not in school in many different ways, the single largest change during summer is in their free time, largely spent in front of screens, with an effect on screen time that is nearly twice the increase in time spent working. The implications of this for teens' health and wellbeing is unclear, given that a large increase in time spent in front of screens may be deleterious to their mental health and long-term development.

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Table 1: Time with Children, Weekdays

<b>Panel A: Women with At Least One Child Age 6-17</b>						
	In Presence of Kids	Secondary Childcare	Total Kids Activities	Help Kids Ed	Drive Kids	Other Activities w/ Kids
School	-0.55*** ( 0.17)	-1.33*** ( 0.19)	0.60*** ( 0.07)	0.25*** ( 0.02)	0.06*** ( 0.01)	0.30*** ( 0.07)
Summer Mean	5.64	5.21	1.19	0.04	0.07	1.08
Observations	9,342	8,375	9,342	9,342	9,342	9,342

<b>Panel B: Men with At Least One Child Age 6-17</b>						
	In Presence of Kids	Secondary Childcare	Total Kids Activities	Help Kids Ed	Drive Kids	Other Activities w/ Kids
School	-0.71*** ( 0.16)	-1.07*** ( 0.19)	0.18*** ( 0.06)	0.10*** ( 0.02)	0.02*** ( 0.01)	0.05 ( 0.06)
Summer Mean	3.42	3.15	0.62	0.02	0.03	0.57
Observations	6,851	6,137	6,851	6,851	6,851	6,851

*Notes:* Time is reported in hours. This table considers weekdays only. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start, this takes value 1 for weeks after the start of school; for summer start, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together. Panel A (B) is for women (men) age 25-55 with at least one child age 6-17 in the household. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded, as are days more than 9 weeks away from the week of the school start or summer start. "Y Mean" corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.

Table 2: Baseline: Weekdays

<b>Panel A: Women with At Least One Child Age 6-17</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.43*** (0.08)	-0.05 (0.04)	0.15 (0.11)	0.59*** (0.08)	0.17 (0.18)	0.05 (0.04)	-0.41*** (0.11)	-0.06* (0.03)	-0.09*** (0.03)	0.08 (0.05)
Summer Mean	8.34	0.82	3.06	1.32	4.12	0.12	3.41	0.98	0.27	1.34
Observations	9,342	9,342	9,342	9,342	9,342	9,342	9,342	9,342	9,342	9,342
<b>Panel B: Women with No Children Age 3-18</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.14 (0.11)	-0.01 (0.05)	0.05 (0.11)	0.16* (0.09)	-0.03 (0.21)	-0.01 (0.05)	0.03 (0.15)	-0.02 (0.04)	-0.04 (0.03)	0.04 (0.06)
Summer Mean	8.38	0.93	2.27	0.67	5.12	0.17	3.83	1.00	0.25	1.23
Observations	7,959	7,959	7,959	7,959	7,959	7,959	7,959	7,959	7,959	7,959
<b>Panel C: Men with At Least One Child Age 6-17</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.21** (0.10)	-0.05 (0.04)	-0.02 (0.10)	0.13* (0.07)	0.58** (0.21)	0.00 (0.03)	-0.36*** (0.13)	-0.03 (0.04)	-0.08 (0.05)	0.05 (0.07)
Summer Mean	7.79	0.68	1.45	0.71	7.12	0.05	3.13	1.09	0.36	1.47
Observations	6,851	6,851	6,851	6,851	6,851	6,851	6,851	6,851	6,851	6,851
<b>Panel D: Children Age 15-17</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-1.30*** (0.19)	0.17*** (0.05)	-0.68*** (0.11)	-0.14** (0.06)	-0.77*** (0.19)	5.55*** (0.24)	-2.03*** (0.26)	-0.08 (0.05)	-0.56*** (0.13)	-0.08 (0.09)
Summer Mean	10.09	0.74	1.23	0.25	1.39	0.65	6.10	0.93	1.20	1.22
Observations	2,694	2,694	2,694	2,694	2,694	2,694	2,694	2,694	2,694	2,694

Notes: Time is reported in hours. This table considers weekdays only. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start, this takes value 1 for weeks after the start of school; for summer start, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together. Panel A (C) is for women (men) age 25-55 with at least one child age 6-17 in the household, Panel B is for women age 25-55 with no children age 3-18 in the household, and Panel D is for children age 15-17. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded, as are days more than 9 weeks away from the week of the school start or summer start. "Y Mean" corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.

Table 3: Weekends

<b>Panel A: Women with At Least One Child Age 6-17</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	0.10 (0.09)	0.04 (0.04)	0.06 (0.11)	0.26*** (0.08)	-0.23* (0.12)	0.05 (0.03)	0.09 (0.13)	-0.06 (0.04)	-0.13*** (0.04)	-0.15** (0.06)
Summer Mean	9.19	0.79	3.59	1.11	1.14	0.08	4.97	1.17	0.40	1.34
Observations	9,822	9,822	9,822	9,822	9,822	9,822	9,822	9,822	9,822	9,822

<b>Panel B: Women with No Children Age 3-18</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.02 (0.11)	-0.02 (0.05)	-0.02 (0.13)	0.00 (0.08)	0.01 (0.14)	0.03 (0.04)	0.01 (0.16)	0.06 (0.05)	-0.04 (0.05)	-0.00 (0.07)
Summer Mean	9.34	0.88	3.13	0.66	1.35	0.07	5.59	1.14	0.34	1.33
Observations	8,116	8,116	8,116	8,116	8,116	8,116	8,116	8,116	8,116	8,116

<b>Panel C: Men with At Least One Child Age 6-17</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	0.04 (0.10)	0.02 (0.04)	0.00 (0.14)	0.29*** (0.08)	-0.04 (0.18)	-0.00 (0.02)	0.06 (0.17)	0.01 (0.05)	-0.21** (0.08)	-0.17* (0.09)
Summer Mean	8.89	0.54	2.85	0.83	1.76	0.04	5.33	1.29	0.73	1.55
Observations	6,936	6,936	6,936	6,936	6,936	6,936	6,936	6,936	6,936	6,936

<b>Panel D: Children Age 15-17</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	0.02 (0.20)	0.06 (0.06)	-0.14 (0.15)	0.00 (0.07)	-0.17 (0.18)	0.59*** (0.11)	-0.26 (0.27)	0.00 (0.06)	-0.06 (0.16)	-0.03 (0.11)
Summer Mean	10.48	0.71	1.25	0.23	1.04	0.24	6.47	0.97	1.12	1.31
Observations	2,874	2,874	2,874	2,874	2,874	2,874	2,874	2,874	2,874	2,874

Notes: Time is reported in hours. This table considers Saturdays and Sundays only. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start, this takes value 1 for weeks after the start of school; for summer start, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The school start and summer start periods are stacked together. Panel A (C) is for women (men) age 25-55 with at least one child age 6-17 in the household, Panel B is for women age 25-55 with no children age 3-18 in the household, and Panel D is for children age 15-17. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded, as are days more than 9 weeks away from the week of the school start or summer start. "Y Mean" corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.

Table 4: Women with At Least One Child Age 6-17, by Age of Children

<b>Panel A: Child Age 6-11 (and No Child Age 12-17)</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.62*** ( 0.12)	-0.03 ( 0.05)	0.25 ( 0.16)	0.87*** ( 0.13)	0.12 ( 0.27)	0.01 ( 0.06)	-0.60*** ( 0.16)	-0.06 ( 0.04)	-0.09** ( 0.04)	0.12* ( 0.07)
Summer Mean	8.47	0.76	2.92	1.73	3.92	0.16	3.32	0.98	0.25	1.28
Observations	4,290	4,290	4,290	4,290	4,290	4,290	4,290	4,290	4,290	4,290

<b>Panel B: Child Age 12-17 (and No Child Age 6-11)</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.09 ( 0.16)	-0.04 ( 0.08)	0.03 ( 0.21)	0.21* ( 0.11)	0.15 ( 0.33)	0.10 ( 0.06)	-0.29 ( 0.21)	-0.08 ( 0.06)	-0.04 ( 0.06)	0.01 ( 0.08)
Summer Mean	8.18	0.90	3.05	0.76	4.61	0.04	3.60	0.99	0.27	1.36
Observations	2,929	2,929	2,929	2,929	2,929	2,929	2,929	2,929	2,929	2,929

*Notes:* Time is reported in hours. This table considers women age 25-55 with at least one child age 6-17 in the household. It considers only weekdays. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start, this takes value 1 for weeks after the start of school; for summer start, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together. Panel A is for women with at least one household child age 6-11 in the household (and no household child age 12-17). Panel B is for women with at least one household child age 12-17 (and no household child age 6-11). The week of school start and summer start is excluded, as are days more than 9 weeks away from the week of the school start or summer start. "Y Mean" corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.

Table 5: Women with At Least One Child Age 6-17, by Employment and HH Income

<b>Panel A: Not Employed</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.62*** (0.15)	-0.06 (0.08)	0.53** (0.21)	1.03*** (0.17)	-0.33* (0.17)	0.15 (0.10)	-0.56** (0.22)	-0.07 (0.05)	-0.04 (0.06)	-0.03 (0.09)
Summer Mean	8.91	0.70	4.31	1.96	0.78	0.15	4.35	1.01	0.31	1.21
Observations	3,004	3,004	3,004	3,004	3,004	3,004	3,004	3,004	3,004	3,004
<b>Panel B: Employed</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.32*** (0.10)	-0.05 (0.04)	0.01 (0.12)	0.41*** (0.08)	0.29 (0.21)	0.01 (0.03)	-0.32** (0.12)	-0.05 (0.04)	-0.11*** (0.03)	0.11* (0.06)
Summer Mean	8.06	0.88	2.46	1.02	5.73	0.10	2.95	0.97	0.25	1.40
Observations	6,338	6,338	6,338	6,338	6,338	6,338	6,338	6,338	6,338	6,338
<b>Panel C: HH Income Below \$50,000</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.32 (0.21)	-0.11 (0.09)	-0.20 (0.23)	0.39** (0.19)	0.53 (0.39)	0.12 (0.10)	-0.60** (0.27)	-0.04 (0.06)	0.03 (0.06)	0.15 (0.10)
Summer Mean	8.77	0.82	3.19	1.44	3.50	0.20	3.58	0.92	0.17	1.16
Observations	2,021	2,021	2,021	2,021	2,021	2,021	2,021	2,021	2,021	2,021
<b>Panel D: HH Income At Least \$50,000</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.44*** (0.14)	0.03 (0.07)	0.23 (0.21)	0.63*** (0.14)	0.10 (0.36)	0.03 (0.06)	-0.45** (0.19)	-0.10* (0.06)	-0.17** (0.07)	0.08 (0.10)
Summer Mean	8.19	0.81	2.80	1.30	4.52	0.08	3.08	1.06	0.38	1.52
Observations	2,577	2,577	2,577	2,577	2,577	2,577	2,577	2,577	2,577	2,577

Notes: Time is reported in hours. This table considers women age 25-55 with at least one child age 6-17 in the household. It considers only weekdays. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start, this takes value 1 for weeks after the start of school; for summer start, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together. Panel A (B) is for women not employed (employed) as of the last CPS interview, and Panel C (D) is for women with a household income below (at least) \$50,000 as of the last CPS interview. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded, as are days more than 9 weeks away from the week of the school start or summer start. "Y Mean" corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.

Table 6: Screen Time, Children Age 15-17

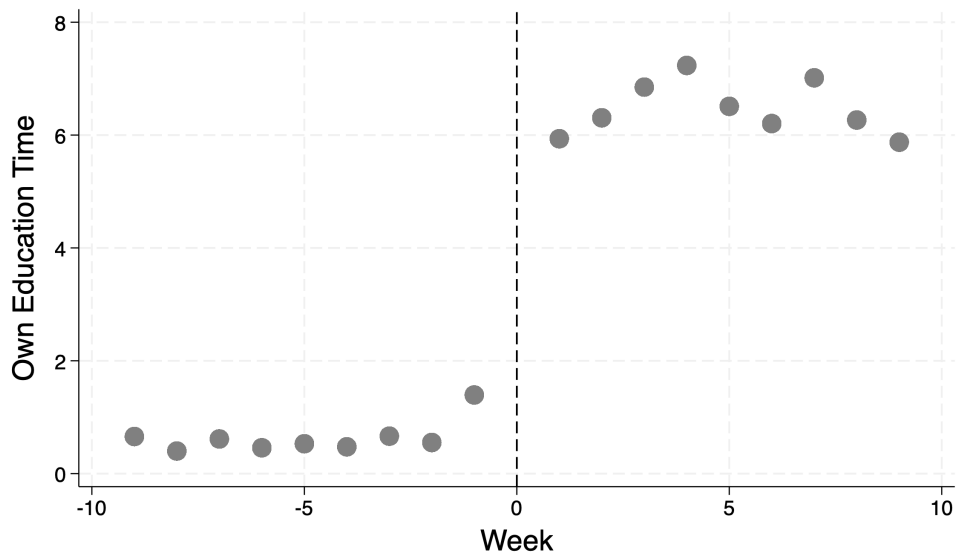
<b>Panel A: Games, TV, and Computer</b>				
	Total	Games	TV	Computer
School	-1.41*** ( 0.23)	-0.38*** ( 0.12)	-0.85*** ( 0.19)	-0.17** ( 0.08)
Summer Mean	3.76	0.68	2.61	0.47
Observations	2,694	2,694	2,694	2,694

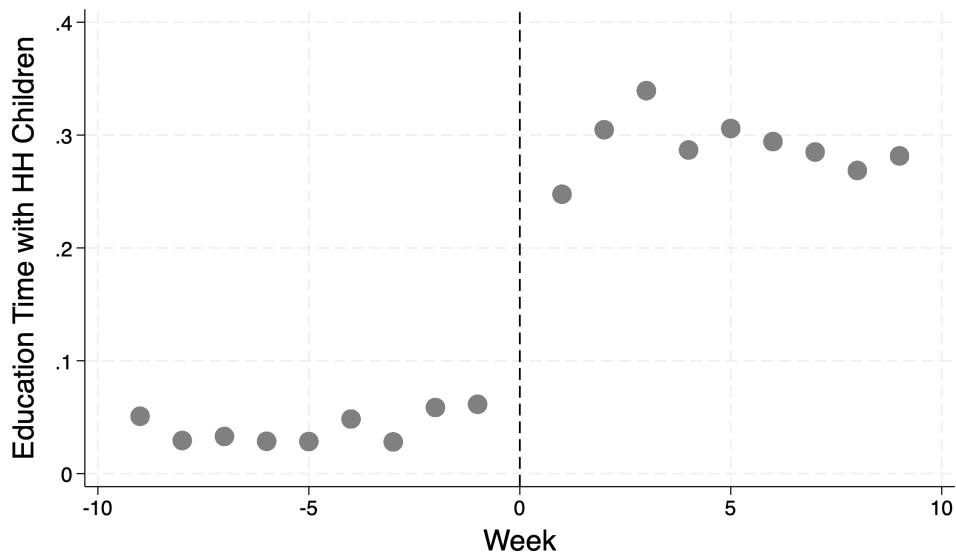
<b>Panel B: Telephone</b>	
	Telephone
School	-0.03 ( 0.06)
Summer Mean	0.28
Observations	2,694

*Notes:* Time is reported in hours. This table considers children age 15-17. Panel A considers games, tv, and computer use. The Total Screen Time variable is the sum of the final three columns. The Games column is "Playing games"; the TV column is "Television and movies (not religious)"; and the Computer column is "Computer use for leisure (exc. Games)." Panel B considers telephone use. It considers only weekdays. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start, this takes value 1 for weeks after the start of school; for summer start, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded, as are days more than 9 weeks away from the week of the school start or summer start. "Y Mean" corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.

Figure 1: Age 15-17 Weekday Educational Time and Weekday Time Women with At Least One Child Age 6-17 Spent with Children on Educational Activities



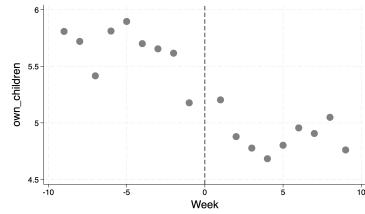
(a) 15-17 Year Old, Own Educational Time



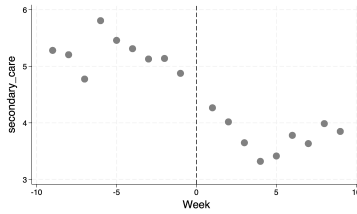
(b) Women with At Least One Child Age 6-17, Time Helping HH Children on Educational Activities

Notes: Time is reported in hours. Panel A shows the amount of education time for 15-17 year olds. Panel B shows the amount of time mothers help household children with educational activities. Daily observations are binned at the weekly level. The week of school start/summer start is omitted and is indicated with the dashed vertical line.

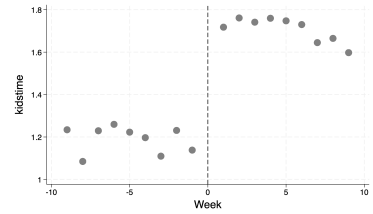
Figure 2: Women and Men, Time with Children, Weekdays



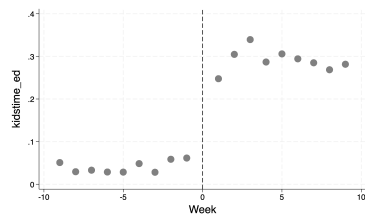
(a) Women, Time in Presence of Own Children



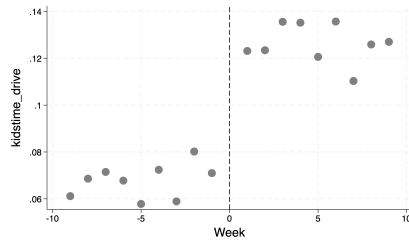
(b) Women, Secondary Childcare



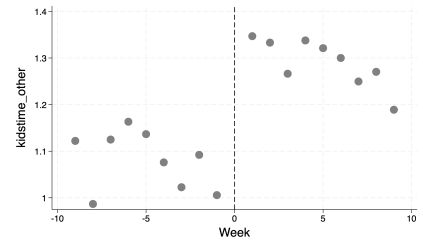
(c) Women, Total Active Time w/ HH Children



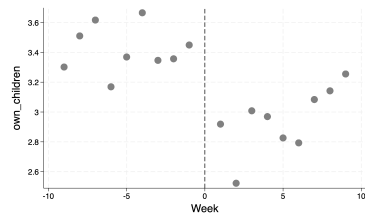
(d) Women, Education w/ HH Children



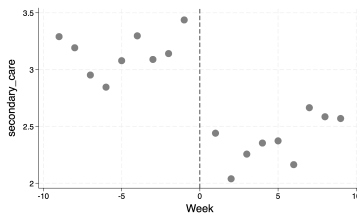
(e) Women, Driving Children



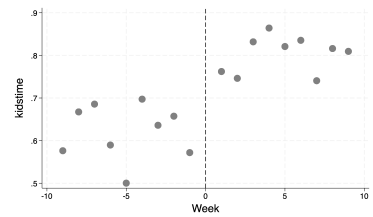
(f) Women, Other Time w/ Children



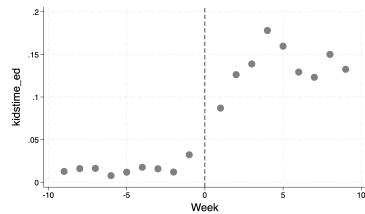
(g) Men, Time in Presence of Own Children



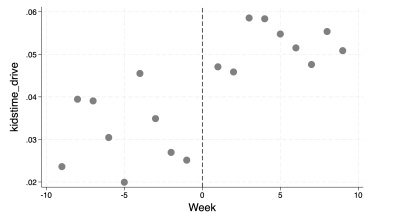
(h) Men, Secondary Childcare



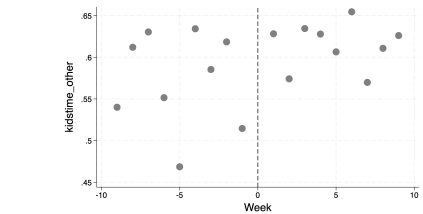
(i) Men, Total Active Time w/ HH Children



(j) Men, Education w/ HH Children



(k) Men, Driving Children

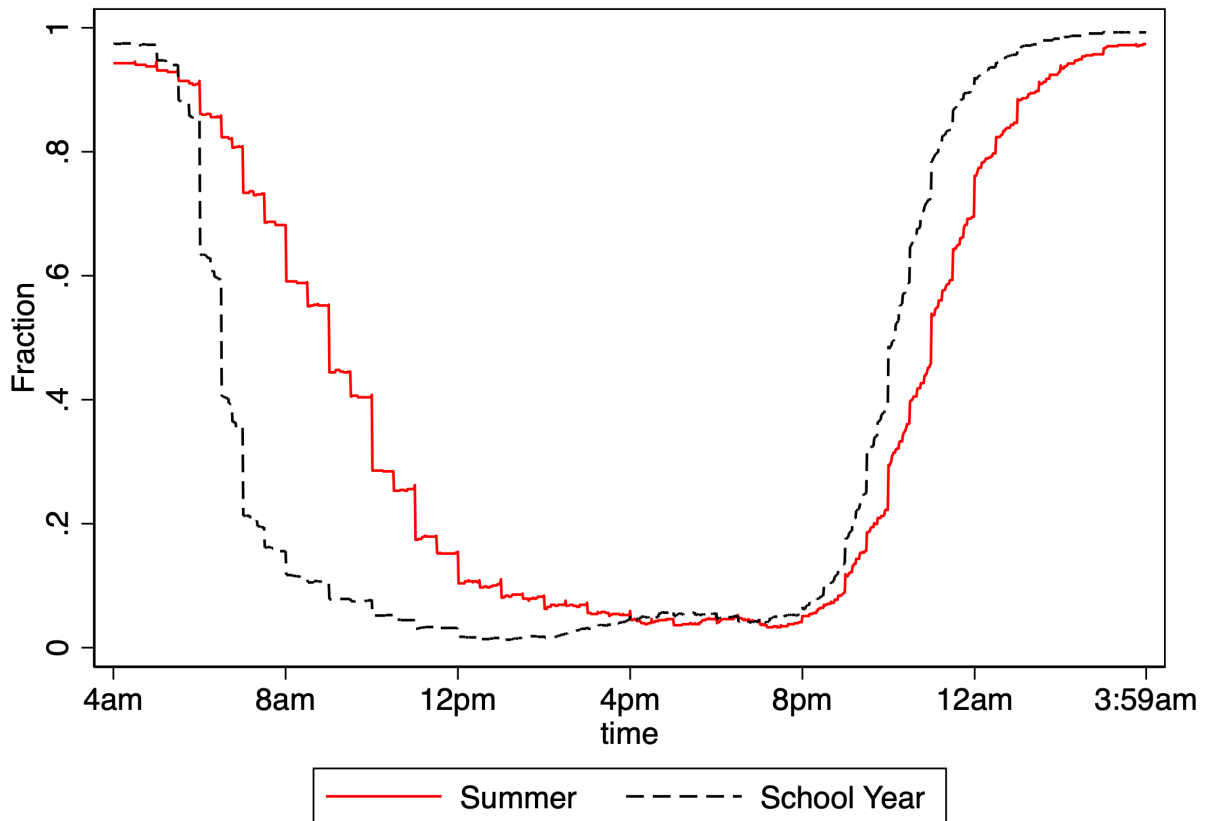


(l) Men, Other Time w/ Children

Notes: Time is reported in hours. These graphs are for weekdays for the Women with At Least One Child Age 6-17 sample (panels a-e) and or the Men with At Least One Child Age 6-17 sample (panels f-j). Each graph is a different outcome. The data is the stacked version. Daily observations are binned at the weekly level. The week of school start/summer start is omitted and is indicated with the dashed vertical line.



Figure 3: Children Age 15-17, Sleep, Summer vs. School Year



Notes: This graph shows the percentage of children age 15-17 who are asleep for every minute between 4am and 3:59pm the following day. The dashed black line restricts to the nine weeks at the beginning of the school year and the last nine weeks at the end of the school year. The solid red line restricts to the first nine weeks after school ends and the last nine weeks before school begins. The week of school start and school end is excluded. We consider Monday at 4:00am through Friday at 11:59am.

## A Appendix Tables

Table A1: Weekdays, Weighted Regression

<b>Panel A: Women with At Least One Child Age 6-17</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.45*** (0.10)	-0.06 (0.05)	0.12 (0.14)	0.53*** (0.09)	0.11 (0.22)	0.03 (0.04)	-0.31** (0.13)	-0.03 (0.03)	-0.07** (0.03)	0.09* (0.06)
Summer Mean	8.34	0.82	3.06	1.32	4.12	0.12	3.41	0.98	0.27	1.34
Observations	9,342	9,342	9,342	9,342	9,342	9,342	9,342	9,342	9,342	9,342

<b>Panel B: Women with No Children Age 3-18</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.19 (0.13)	0.01 (0.05)	0.14 (0.14)	0.11 (0.09)	-0.04 (0.25)	-0.05 (0.06)	0.11 (0.18)	-0.02 (0.05)	-0.05 (0.04)	0.02 (0.07)
Summer Mean	8.38	0.93	2.27	0.67	5.12	0.17	3.83	1.00	0.25	1.23
Observations	7,959	7,959	7,959	7,959	7,959	7,959	7,959	7,959	7,959	7,959

<b>Panel C: Men with At Least One Child Age 6-17</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.19 (0.11)	-0.06 (0.06)	-0.06 (0.11)	0.13* (0.07)	0.62** (0.24)	0.00 (0.04)	-0.40** (0.17)	-0.04 (0.04)	-0.09* (0.05)	0.08 (0.08)
Summer Mean	7.79	0.68	1.45	0.71	7.12	0.05	3.13	1.09	0.36	1.47
Observations	6,851	6,851	6,851	6,851	6,851	6,851	6,851	6,851	6,851	6,851

<b>Panel D: Children Age 15-17</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-1.44*** (0.22)	0.22*** (0.06)	-0.69*** (0.12)	-0.08 (0.06)	-0.82*** (0.22)	5.69*** (0.28)	-2.26*** (0.29)	-0.04 (0.06)	-0.47*** (0.15)	-0.05 (0.10)
Summer Mean	10.09	0.74	1.23	0.25	1.39	0.65	6.10	0.93	1.20	1.22
Observations	2,694	2,694	2,694	2,694	2,694	2,694	2,694	2,694	2,694	2,694

Notes: Time is reported in hours. This table considers weekdays only. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start, this takes value 1 for weeks after the start of school; for summer start, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together. Panel A (C) is for women (men) age 25-55 with at least one child age 6-17 in the household, Panel B is for women age 25-55 with no children age 3-18 in the household, and Panel D is for children age 15-17. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded, as are days more than 9 weeks away from the week of the school start or summer start. "Y Mean" corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.

Table A2: Summary Statistics, Women, Weekdays

Variable	Full	Parent	Analysis
Metropolitan	0.85 (0.36)	0.84 (0.37)	0.84 (0.37)
Less than High School	0.08 (0.27)	0.09 (0.28)	0.10 (0.30)
High School	0.23 (0.42)	0.23 (0.42)	0.24 (0.43)
Some College or Associate	0.30 (0.46)	0.30 (0.46)	0.32 (0.47)
Bachelor's Degree	0.26 (0.44)	0.25 (0.43)	0.24 (0.42)
Grad./Profess. Degree	0.14 (0.35)	0.13 (0.33)	0.10 (0.30)
White	0.79 (0.41)	0.82 (0.39)	0.81 (0.39)
Black	0.14 (0.35)	0.11 (0.32)	0.12 (0.32)
Other Race	0.07 (0.25)	0.07 (0.26)	0.07 (0.25)
Hispanic	0.14 (0.35)	0.16 (0.37)	0.16 (0.37)
Age	40.22 (8.54)	39.63 (6.91)	39.40 (7.02)
Year	2,009.90 (4.84)	2,009.85 (4.82)	2,009.84 (4.79)
N	32,200	15,934	7,404
Age	25–55	25–55	25–55
Days	Weekdays	Weekdays	Weekdays
Restrict to Child(ren) Age 6–17	No	Yes	Yes
Analysis Sample Restrictions	No	No	Yes

Notes: This table shows—for women age 25–55 on weekdays—how the mean values of variables change as we make sample restrictions. The “Full” column makes no restrictions. The “Parent” sample restricts to having at least one child age 6–17 in the household. The “Analysis” column is the main RDD analysis sample, except that it includes only one observation per person; additional sample restrictions for this column are to exclude holidays, to exclude those in K–12 education, and to make the 9-week RDD bandwidth restrictions as described in the paper. The number of observations corresponds to all columns except metropolitan, for which we observe fewer valid or nonmissing values. White (Black) are “White (Black) only,” and Other Race includes all other categories of race.

Table A3: Summary Statistics, Men, Weekdays

Variable	Full	Parent	Analysis
Metropolitan	0.85 (0.36)	0.83 (0.37)	0.84 (0.37)
Less than High School	0.08 (0.28)	0.09 (0.28)	0.09 (0.29)
High School	0.26 (0.44)	0.25 (0.43)	0.25 (0.44)
Some College or Associate	0.27 (0.44)	0.26 (0.44)	0.26 (0.44)
Bachelor's Degree	0.25 (0.43)	0.24 (0.43)	0.25 (0.43)
Grad./Profess. Degree	0.14 (0.35)	0.16 (0.37)	0.15 (0.35)
White	0.82 (0.38)	0.86 (0.35)	0.86 (0.35)
Black	0.11 (0.31)	0.07 (0.25)	0.07 (0.25)
Other Race	0.07 (0.25)	0.07 (0.26)	0.07 (0.26)
Hispanic	0.14 (0.35)	0.14 (0.35)	0.15 (0.35)
Age	40.83 (8.39)	41.87 (6.65)	41.84 (6.68)
Year	2,010.05 (4.87)	2,009.95 (4.86)	2,009.91 (4.86)
N	26,196	10,642	5,389
Age	25–55	25–55	25–55
Days	Weekdays	Weekdays	Weekdays
Restrict to Child(ren) Age 6–17	No	Yes	Yes
Analysis Sample Restrictions	No	No	Yes

Notes: This table shows—for men age 25–55 on weekdays—how the mean values of variables change as we make sample restrictions. The “Full” column makes no restrictions. The “Parent” sample restricts to having at least one child age 6-17 in the household. The “Analysis” column is the main RDD analysis sample, except that it includes only one observation per person; additional sample restrictions for this column are to exclude holidays, to exclude those in K-12 education, and to make the 9-week RDD bandwidth restrictions as described in the paper. The number of observations corresponds to all columns except metropolitan, for which we observe fewer valid or nonmissing values. White (Black) are “White (Black) only,” and Other Race includes all other categories of race.

Table A4: Summary Statistics, Children, Weekdays

Variable	Full	Analysis
Female	0.49 (0.50)	0.49 (0.50)
Metropolitan	0.83 (0.37)	0.84 (0.37)
Less than High School	0.99 (0.11)	0.99 (0.11)
High School	0.01 (0.09)	0.01 (0.09)
Some College or Associate	0.00 (0.06)	0.00 (0.06)
Bachelor's Degree	0.00 (0.02)	0.00 (0.02)
Grad./Profess. Degree	0.00 (0.02)	0.00 (0.00)
White	0.80 (0.40)	0.80 (0.40)
Black	0.12 (0.32)	0.12 (0.32)
Other Race	0.08 (0.28)	0.08 (0.28)
Hispanic	0.18 (0.38)	0.18 (0.38)
Age	16.07 (0.79)	16.08 (0.79)
Year	2,009.38 (4.67)	2,009.36 (4.60)
N	4,273	2,120
Age	15–17	15–17
Days	Weekdays	Weekdays
Analysis Sample Restrictions	No	Yes

Notes: This table shows—for children age 15–17 on weekdays—how the mean values of variables change as we make sample restrictions. The “Full” column makes no restrictions. The “Analysis” column is the main RDD analysis sample, except that it includes only one observation per person; additional sample restrictions for this column are to exclude holidays, to exclude those in K-12 education, and to make the 9-week RDD bandwidth restrictions as described in the paper. The number of observations corresponds to all columns except metropolitan, for which we observe fewer valid or nonmissing values. White (Black) are “White (Black) only,” and Other Race includes all other categories of race.

Table A5: Baseline: Weekdays, 15-17 Year Old, by Gender

<b>Panel A: Children Age 15-17, Female</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-1.15*** (0.27)	0.26** (0.10)	-0.85*** (0.19)	-0.22** (0.08)	-0.76*** (0.24)	5.28*** (0.37)	-1.99*** (0.36)	-0.07 (0.08)	-0.32** (0.14)	0.05 (0.13)
Summer Mean	10.21	0.93	1.46	0.30	1.26	0.67	5.92	0.90	0.76	1.29
Observations	1,317	1,317	1,317	1,317	1,317	1,317	1,317	1,317	1,317	1,317
<b>Panel A: Children Age 15-17, Male</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-1.44*** (0.26)	0.08 (0.05)	-0.54*** (0.14)	-0.07 (0.07)	-0.79** (0.28)	5.91*** (0.31)	-2.12*** (0.37)	-0.07 (0.07)	-0.82*** (0.20)	-0.16 (0.12)
Summer Mean	9.99	0.55	1.00	0.19	1.51	0.62	6.27	0.96	1.63	1.15
Observations	1,377	1,377	1,377	1,377	1,377	1,377	1,377	1,377	1,377	1,377

*Notes:* Time is reported in hours. This table considers weekdays only. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start, this takes value 1 for weeks after the start of school; for summer start, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together. Panel A (B) is for male (female) children age 15-17. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded, as are days more than 9 weeks away from the week of the school start or summer start. "Y Mean" corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.

Table A6: Time with Children, Weekdays, Seasonal Comparison

<b>Panel A: Women with At Least One Child Age 6-17</b>						
	In Presence of Kids	Secondary Childcare	Total Kids Activities	Help Kids Ed	Drive Kids	Other Activities w/ Kids
School	-0.75*** ( 0.13)	-1.42*** ( 0.15)	0.45*** ( 0.06)	0.25*** ( 0.01)	0.06*** ( 0.01)	0.14** ( 0.05)
Summer Mean	5.73	5.23	1.23	0.04	0.07	1.13
Observations	7,738	6,972	7,738	7,738	7,738	7,738

<b>Panel B: Men with At Least One Child Age 6-17</b>						
	In Presence of Kids	Secondary Childcare	Total Kids Activities	Help Kids Ed	Drive Kids	Other Activities w/ Kids
School	-0.51*** ( 0.13)	-0.72*** ( 0.15)	0.22*** ( 0.04)	0.15*** ( 0.01)	0.02*** ( 0.00)	0.05 ( 0.04)
Summer Mean	3.48	3.12	0.59	0.01	0.03	0.55
Observations	5,473	4,907	5,473	5,473	5,473	5,473

*Notes:* Time is reported in hours. This table considers weekdays only. It reports the results of regressions of an outcome on an indicator for being in a school year month (defined as September 16-30, October, November 1-15, January 16-31, February, March, and April; the excluded summer month is defined as July). The regression also includes a number of controls. Panel A (C) is for women (men) age 25-55 with at least one child age 6-17 in the household, Panel B is for women age 25-55 with no children age 3-17 in the household, and Panel D is for children age 15-17. Each coefficient corresponds to a different regression. "Y Mean" corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.



Table A7: Baseline: Weekdays, Seasonal Comparison

<b>Panel A: Women with At Least One Child Age 6-17</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.34*** (0.07)	0.00 (0.03)	-0.16* (0.08)	0.45*** (0.06)	0.33** (0.14)	0.09*** (0.03)	-0.25*** (0.09)	-0.07*** (0.02)	-0.11*** (0.02)	0.05 (0.04)
Summer Mean	8.38	0.82	3.07	1.35	4.01	0.10	3.45	0.97	0.26	1.36
Observations	7,738	7,738	7,738	7,738	7,738	7,738	7,738	7,738	7,738	7,738
<b>Panel B: Women with No Children Age 3-18</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	0.02 (0.07)	0.01 (0.04)	-0.17** (0.08)	-0.00 (0.06)	0.20 (0.15)	0.06 (0.04)	-0.06 (0.10)	-0.02 (0.03)	-0.09*** (0.02)	0.01 (0.04)
Summer Mean	8.35	0.94	2.33	0.71	5.05	0.21	3.79	0.99	0.27	1.22
Observations	6,565	6,565	6,565	6,565	6,565	6,565	6,565	6,565	6,565	6,565
<b>Panel C: Men with At Least One Child Age 6-17</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.04 (0.07)	-0.07** (0.03)	-0.12 (0.07)	0.22*** (0.05)	0.27* (0.16)	0.03 (0.02)	-0.07 (0.10)	-0.04 (0.03)	-0.14*** (0.04)	0.00 (0.05)
Summer Mean	7.81	0.70	1.46	0.67	7.03	0.05	3.16	1.09	0.36	1.48
Observations	5,473	5,473	5,473	5,473	5,473	5,473	5,473	5,473	5,473	5,473
<b>Panel D: Children Age 15-17</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-1.33*** (0.15)	0.13** (0.05)	-0.58*** (0.10)	-0.14*** (0.05)	-0.92*** (0.17)	5.79*** (0.13)	-2.11*** (0.21)	-0.10** (0.05)	-0.50*** (0.10)	-0.15* (0.09)
Summer Mean	10.03	0.78	1.22	0.26	1.35	0.49	6.22	0.98	1.14	1.23
Observations	2,273	2,273	2,273	2,273	2,273	2,273	2,273	2,273	2,273	2,273

Notes: Time is reported in hours. This table considers weekdays only. It reports the results of regressions of an outcome on an indicator for being in a school year month (defined as September 16-30, October, November 1-15, January 16-31, February, March, and April; the excluded summer month is defined as July). The regression also includes a number of controls. Panel A (C) is for women (men) age 25-55 with at least one child age 6-17 in the household, Panel B is for women age 25-55 with no children age 3-18 in the household, and Panel D is for children age 15-17. Each coefficient corresponds to a different regression. "Y Mean" corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.

Table A8: Baseline: Weekdays, RDD Bandwidth Sensitivity, Women

Panel A: Women with At Least One Child Age 6-17										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
9 Weeks	-0.43*** (0.08)	-0.05 (0.04)	0.15 (0.11)	0.59*** (0.08)	0.17 (0.18)	0.05 (0.04)	-0.41*** (0.11)	-0.06* (0.03)	-0.09*** (0.03)	0.08 (0.05)
Observations	9,342	9,342	9,342	9,342	9,342	9,342	9,342	9,342	9,342	9,342
8 Weeks	-0.41*** (0.09)	-0.07 (0.04)	0.14 (0.12)	0.54*** (0.08)	0.25 (0.20)	0.02 (0.04)	-0.42*** (0.12)	-0.07** (0.03)	-0.08** (0.03)	0.09* (0.05)
Observations	8,239	8,239	8,239	8,239	8,239	8,239	8,239	8,239	8,239	8,239
7 Weeks	-0.37*** (0.10)	-0.09* (0.05)	0.19 (0.13)	0.57*** (0.09)	0.11 (0.21)	0.00 (0.05)	-0.42*** (0.13)	-0.07** (0.03)	-0.09** (0.03)	0.14** (0.06)
Observations	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200
6 Weeks	-0.35*** (0.11)	-0.10* (0.05)	0.16 (0.14)	0.55*** (0.10)	0.03 (0.24)	0.03 (0.05)	-0.37** (0.14)	-0.08** (0.04)	-0.06* (0.04)	0.14** (0.06)
Observations	6,120	6,120	6,120	6,120	6,120	6,120	6,120	6,120	6,120	6,120
5 Weeks	-0.38*** (0.12)	-0.12* (0.06)	0.29* (0.16)	0.53*** (0.12)	-0.10 (0.27)	0.04 (0.06)	-0.36** (0.16)	-0.08* (0.04)	-0.08* (0.04)	0.18** (0.07)
Observations	5,140	5,140	5,140	5,140	5,140	5,140	5,140	5,140	5,140	5,140
4 Weeks	-0.35** (0.14)	-0.17** (0.07)	0.51** (0.19)	0.45*** (0.13)	-0.21 (0.31)	0.07 (0.07)	-0.34* (0.19)	-0.08 (0.05)	-0.08 (0.05)	0.12 (0.08)
Observations	4,138	4,138	4,138	4,138	4,138	4,138	4,138	4,138	4,138	4,138
3 Weeks	-0.35** (0.17)	-0.19** (0.09)	0.45* (0.23)	0.41** (0.16)	0.08 (0.38)	0.01 (0.08)	-0.39* (0.23)	-0.06 (0.06)	-0.10 (0.06)	0.09 (0.10)
Observations	3,126	3,126	3,126	3,126	3,126	3,126	3,126	3,126	3,126	3,126
2 Weeks	-0.50** (0.24)	-0.15 (0.14)	0.31 (0.32)	0.56** (0.21)	0.38 (0.53)	-0.07 (0.10)	-0.43 (0.32)	-0.11 (0.08)	-0.08 (0.08)	0.03 (0.14)
Observations	2,072	2,072	2,072	2,072	2,072	2,072	2,072	2,072	2,072	2,072

Notes: Time is reported in hours. Each row uses a different bandwidth, measured in weeks. The sample is limited to women age 25-55 with at least one child age 6-17 in the household. This table considers weekdays only. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start, this takes value 1 for weeks after the start of school; for summer start, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded. "Y Mean" corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.

Table A9: Baseline: Weekdays, RDD Bandwidth Sensitivity, Women Control

Panel B: Women with No Children Age 3-18										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
9 Weeks	-0.14 (0.11)	-0.01 (0.05)	0.05 (0.11)	0.16* (0.09)	-0.03 (0.21)	-0.01 (0.05)	0.03 (0.15)	-0.02 (0.04)	-0.04 (0.03)	0.04 (0.06)
Observations	7,959	7,959	7,959	7,959	7,959	7,959	7,959	7,959	7,959	7,959
8 Weeks	-0.10 (0.11)	-0.03 (0.05)	-0.02 (0.12)	0.17* (0.09)	0.06 (0.23)	-0.02 (0.05)	0.02 (0.16)	-0.04 (0.04)	-0.04 (0.03)	0.02 (0.07)
Observations	7,091	7,091	7,091	7,091	7,091	7,091	7,091	7,091	7,091	7,091
7 Weeks	-0.11 (0.12)	-0.07 (0.06)	-0.03 (0.13)	0.21** (0.10)	0.09 (0.25)	-0.03 (0.06)	-0.03 (0.17)	-0.03 (0.04)	-0.01 (0.03)	0.03 (0.07)
Observations	6,171	6,171	6,171	6,171	6,171	6,171	6,171	6,171	6,171	6,171
6 Weeks	-0.19 (0.14)	-0.05 (0.06)	0.02 (0.15)	0.21* (0.11)	0.19 (0.27)	-0.09 (0.06)	-0.14 (0.19)	-0.00 (0.05)	-0.03 (0.04)	0.10 (0.08)
Observations	5,232	5,232	5,232	5,232	5,232	5,232	5,232	5,232	5,232	5,232
5 Weeks	-0.11 (0.15)	-0.05 (0.07)	-0.05 (0.17)	0.19 (0.13)	0.10 (0.31)	-0.06 (0.07)	-0.07 (0.21)	-0.05 (0.06)	-0.01 (0.04)	0.09 (0.09)
Observations	4,323	4,323	4,323	4,323	4,323	4,323	4,323	4,323	4,323	4,323
4 Weeks	-0.01 (0.18)	-0.02 (0.09)	-0.01 (0.19)	0.11 (0.15)	0.26 (0.36)	-0.09 (0.08)	-0.25 (0.25)	-0.06 (0.06)	-0.02 (0.05)	0.09 (0.11)
Observations	3,452	3,452	3,452	3,452	3,452	3,452	3,452	3,452	3,452	3,452
3 Weeks	-0.10 (0.23)	-0.07 (0.11)	0.13 (0.24)	0.16 (0.19)	-0.15 (0.44)	-0.06 (0.09)	0.05 (0.31)	-0.01 (0.08)	-0.06 (0.06)	0.11 (0.13)
Observations	2,565	2,565	2,565	2,565	2,565	2,565	2,565	2,565	2,565	2,565
2 Weeks	-0.13 (0.32)	-0.00 (0.16)	0.30 (0.34)	0.30 (0.28)	-0.52 (0.64)	-0.09 (0.13)	0.07 (0.44)	-0.05 (0.11)	-0.09 (0.08)	0.19 (0.20)
Observations	1,686	1,686	1,686	1,686	1,686	1,686	1,686	1,686	1,686	1,686

Notes: Time is reported in hours. Each row uses a different bandwidth, measured in weeks. The sample is limited to women age 25-55 with no children age 3-18 in the household. This table considers weekdays only. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start, this takes value 1 for weeks after the start of school; for summer start, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded. "Y Mean" corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.

Table A10: Baseline: Weekdays, RDD Bandwidth Sensitivity, Men

Panel C: Men with At Least One Child Age 6-17										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
9 Weeks	-0.21**	-0.05	-0.02	0.13*	0.58**	0.00	-0.36***	-0.03	-0.08	0.05
	(0.10)	(0.04)	(0.10)	(0.07)	(0.21)	(0.03)	(0.13)	(0.04)	(0.05)	(0.07)
Observations	6,851	6,851	6,851	6,851	6,851	6,851	6,851	6,851	6,851	6,851
8 Weeks	-0.25**	-0.06	-0.04	0.14*	0.66***	-0.01	-0.30**	-0.03	-0.11**	0.01
	(0.10)	(0.05)	(0.11)	(0.07)	(0.22)	(0.03)	(0.14)	(0.04)	(0.05)	(0.08)
Observations	6,051	6,051	6,051	6,051	6,051	6,051	6,051	6,051	6,051	6,051
7 Weeks	-0.27**	-0.05	-0.10	0.12	0.72***	-0.00	-0.22	-0.06	-0.13**	-0.05
	(0.11)	(0.05)	(0.12)	(0.08)	(0.24)	(0.04)	(0.15)	(0.05)	(0.06)	(0.09)
Observations	5,305	5,305	5,305	5,305	5,305	5,305	5,305	5,305	5,305	5,305
6 Weeks	-0.26**	-0.05	-0.16	0.06	0.77***	0.00	-0.13	-0.07	-0.14**	-0.04
	(0.13)	(0.06)	(0.13)	(0.08)	(0.27)	(0.04)	(0.17)	(0.05)	(0.06)	(0.09)
Observations	4,516	4,516	4,516	4,516	4,516	4,516	4,516	4,516	4,516	4,516
5 Weeks	-0.22	-0.08	-0.14	0.04	0.72**	-0.01	-0.18	-0.05	-0.11	0.02
	(0.14)	(0.07)	(0.14)	(0.09)	(0.30)	(0.05)	(0.19)	(0.06)	(0.07)	(0.11)
Observations	3,776	3,776	3,776	3,776	3,776	3,776	3,776	3,776	3,776	3,776
4 Weeks	-0.16	-0.12	-0.07	0.18	0.69*	-0.07	-0.26	-0.03	-0.16*	0.04
	(0.17)	(0.08)	(0.16)	(0.11)	(0.35)	(0.06)	(0.22)	(0.07)	(0.09)	(0.13)
Observations	3,017	3,017	3,017	3,017	3,017	3,017	3,017	3,017	3,017	3,017
3 Weeks	-0.18	-0.10	0.18	0.26**	0.58	-0.07	-0.45	-0.04	-0.14	0.03
	(0.20)	(0.10)	(0.21)	(0.13)	(0.43)	(0.06)	(0.27)	(0.08)	(0.10)	(0.16)
Observations	2,269	2,269	2,269	2,269	2,269	2,269	2,269	2,269	2,269	2,269
2 Weeks	-0.38	-0.18	0.11	0.34*	0.71	-0.08	-0.11	-0.02	-0.23	0.04
	(0.30)	(0.13)	(0.29)	(0.20)	(0.61)	(0.07)	(0.38)	(0.12)	(0.17)	(0.23)
Observations	1,494	1,494	1,494	1,494	1,494	1,494	1,494	1,494	1,494	1,494

Notes: Time is reported in hours. Each row uses a different bandwidth, measured in weeks. The sample is limited to men age 25-55 with at least one child age 6-17 in the household. This table considers weekdays only. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start, this takes value 1 for weeks after the start of school; for summer start, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded. "Y Mean" corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.

Table A11: Baseline: Weekdays, RDD Bandwidth Sensitivity, Kids

Panel D: Children Age 15-17										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
9 Weeks	-1.30*** (0.19)	0.17*** (0.05)	-0.68*** (0.11)	-0.14** (0.06)	-0.77*** (0.19)	5.55*** (0.24)	-2.03*** (0.26)	-0.08 (0.05)	-0.56*** (0.13)	-0.08 (0.09)
Observations	2,694	2,694	2,694	2,694	2,694	2,694	2,694	2,694	2,694	2,694
8 Weeks	-1.25*** (0.20)	0.14** (0.06)	-0.63*** (0.12)	-0.14** (0.06)	-0.75*** (0.20)	5.31*** (0.25)	-1.91*** (0.27)	-0.07 (0.06)	-0.55*** (0.14)	-0.10 (0.10)
Observations	2,378	2,378	2,378	2,378	2,378	2,378	2,378	2,378	2,378	2,378
7 Weeks	-1.25*** (0.22)	0.14** (0.06)	-0.54*** (0.13)	-0.14** (0.07)	-0.76*** (0.22)	5.12*** (0.28)	-1.71*** (0.30)	-0.09 (0.06)	-0.64*** (0.15)	-0.08 (0.10)
Observations	2,063	2,063	2,063	2,063	2,063	2,063	2,063	2,063	2,063	2,063
6 Weeks	-1.25*** (0.25)	0.12* (0.07)	-0.50*** (0.15)	-0.10 (0.08)	-0.66** (0.24)	5.07*** (0.31)	-1.84*** (0.33)	-0.10 (0.07)	-0.51*** (0.16)	-0.15 (0.11)
Observations	1,764	1,764	1,764	1,764	1,764	1,764	1,764	1,764	1,764	1,764
5 Weeks	-0.98*** (0.28)	0.08 (0.07)	-0.47*** (0.16)	-0.07 (0.09)	-0.92*** (0.27)	4.69*** (0.36)	-1.66*** (0.37)	-0.06 (0.07)	-0.45** (0.18)	-0.13 (0.12)
Observations	1,488	1,488	1,488	1,488	1,488	1,488	1,488	1,488	1,488	1,488
4 Weeks	-1.09*** (0.32)	0.10 (0.09)	-0.34* (0.19)	-0.11 (0.11)	-0.74** (0.32)	4.15*** (0.43)	-1.30*** (0.43)	-0.06 (0.09)	-0.60*** (0.20)	-0.03 (0.14)
Observations	1,208	1,208	1,208	1,208	1,208	1,208	1,208	1,208	1,208	1,208
3 Weeks	-0.98** (0.40)	0.09 (0.11)	-0.50** (0.23)	-0.11 (0.14)	-0.93** (0.41)	3.90*** (0.54)	-1.10** (0.54)	-0.09 (0.11)	-0.46* (0.27)	0.03 (0.18)
Observations	928	928	928	928	928	928	928	928	928	928
2 Weeks	-0.74 (0.55)	0.00 (0.15)	-0.28 (0.32)	-0.21 (0.21)	-1.33** (0.58)	3.50*** (0.77)	-0.14 (0.73)	-0.23 (0.15)	-0.68* (0.39)	-0.23 (0.24)
Observations	640	640	640	640	640	640	640	640	640	640

Notes: Time is reported in hours. Each row uses a different bandwidth, measured in weeks. The sample is limited to children age 15-17. This table considers weekdays only. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start, this takes value 1 for weeks after the start of school; for summer start, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded. "Y Mean" corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.

Table A12: Baseline: Weekdays, Extensive Margin

<b>Panel A: Women with At Least One Child Age 6-17</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.00	0.01	0.01	0.16***	0.02	0.01	-0.01	-0.01	-0.01	0.03**
	(0.00)	(0.02)	(0.01)	(0.02)	(0.02)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)
Summer Mean	1.00	0.85	0.95	0.72	0.57	0.03	0.94	0.95	0.20	0.92
Observations	9,342	9,342	9,342	9,342	9,342	9,342	9,342	9,342	9,342	9,342

<b>Panel B: Women with No Children Age 3-18</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	0.00	-0.00	-0.02	0.03	0.00	0.00	-0.01	-0.01	-0.03	0.00
	(0.00)	(0.02)	(0.01)	(0.02)	(0.02)	(0.01)	(0.01)	(0.01)	(0.02)	(0.02)
Summer Mean	1.00	0.88	0.90	0.30	0.65	0.04	0.94	0.94	0.20	0.89
Observations	7,959	7,959	7,959	7,959	7,959	7,959	7,959	7,959	7,959	7,959

<b>Panel C: Men with At Least One Child Age 6-17</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.00	0.01	0.03	0.14***	0.04**	0.00	-0.01	0.00	-0.04*	0.02
	(0.00)	(0.02)	(0.02)	(0.03)	(0.02)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)
Summer Mean	1.00	0.85	0.76	0.51	0.83	0.01	0.93	0.95	0.22	0.93
Observations	6,851	6,851	6,851	6,851	6,851	6,851	6,851	6,851	6,851	6,851

<b>Panel D: Children Age 15-17</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	0.00	0.13***	-0.17***	-0.03	-0.10***	0.65***	-0.02	-0.01	-0.09**	0.09***
	(0.00)	(0.03)	(0.04)	(0.04)	(0.03)	(0.03)	(0.02)	(0.02)	(0.04)	(0.02)
Summer Mean	1.00	0.81	0.72	0.29	0.26	0.18	0.98	0.94	0.44	0.88
Observations	2,694	2,694	2,694	2,694	2,694	2,694	2,694	2,694	2,694	2,694

Notes: Time is reported in hours. This table considers only the extensive margin. This table considers weekdays only. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start, this takes value 1 for weeks after the start of school; for summer start, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together. Panel A (C) is for women (men) age 25-55 with at least one child age 6-17 in the household, Panel B is for women age 25-55 with no children age 3-18 in the household, and Panel D is for children age 15-17. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded, as are days more than 9 weeks away from the week of the school start or summer start. "Y Mean" corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.

Table A13: Women with At Least One Child Age 6-17, Time with Children, by Employment and HH Income

<b>Panel A: Not Employed</b>						
	In Presence of Kids	Secondary Childcare	Total Kids Activities	Help Kids Ed	Drive Kids	Other Activities w/ Kids
School	-0.46 ( 0.31)	-1.93*** ( 0.35)	1.03*** ( 0.16)	0.33*** ( 0.04)	0.08*** ( 0.02)	0.62*** ( 0.15)
Summer Mean	7.97	7.37	1.77	0.08	0.06	1.63
Observations	3,004	2,717	3,004	3,004	3,004	3,004
<b>Panel B: Employed</b>						
	In Presence of Kids	Secondary Childcare	Total Kids Activities	Help Kids Ed	Drive Kids	Other Activities w/ Kids
School	-0.51*** ( 0.18)	-1.04*** ( 0.21)	0.43*** ( 0.07)	0.21*** ( 0.02)	0.04*** ( 0.01)	0.18** ( 0.06)
Summer Mean	4.52	4.17	0.91	0.02	0.07	0.81
Observations	6,338	5,658	6,338	6,338	6,338	6,338
<b>Panel C: HH Income Below \$50,000</b>						
	In Presence of Kids	Secondary Childcare	Total Kids Activities	Help Kids Ed	Drive Kids	Other Activities w/ Kids
School	-0.81** ( 0.37)	-1.34*** ( 0.40)	0.46** ( 0.18)	0.24*** ( 0.05)	0.08*** ( 0.02)	0.15 ( 0.17)
Summer Mean	5.96	5.43	1.29	0.06	0.06	1.17
Observations	2,021	2,021	2,021	2,021	2,021	2,021
<b>Panel D: HH Income At Least \$50,000</b>						
	In Presence of Kids	Secondary Childcare	Total Kids Activities	Help Kids Ed	Drive Kids	Other Activities w/ Kids
School	-0.50 ( 0.31)	-1.76*** ( 0.34)	0.64*** ( 0.14)	0.22*** ( 0.04)	0.06*** ( 0.01)	0.36** ( 0.13)
Summer Mean	5.40	5.02	1.20	0.04	0.07	1.09
Observations	2,577	2,577	2,577	2,577	2,577	2,577

Notes: Time is reported in hours. This table considers women age 25-55 with at least one child age 6-17 in the household. It considers only weekdays. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start, this takes value 1 for weeks after the start of school; for summer start, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together. Panel A (B) is for women not employed (employed) as of the last CPS interview, and Panel C (D) is for women with a household income below (at least) \$50,000 as of the last CPS interview. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded, as are days more than 9 weeks away from the week of the school start or summer start. "Y Mean" corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.

Table A14: Women with At Least One Child Age 6-17, by Marital Status

<b>Panel A: Married</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.41*** ( 0.09)	-0.04 ( 0.05)	0.15 ( 0.14)	0.60*** ( 0.10)	0.16 ( 0.22)	0.03 ( 0.04)	-0.38*** ( 0.13)	-0.07* ( 0.04)	-0.11*** ( 0.04)	0.04 ( 0.06)
Summer Mean	8.19	0.76	3.31	1.46	3.90	0.08	3.33	1.04	0.32	1.37
Observations	6,277	6,277	6,277	6,277	6,277	6,277	6,277	6,277	6,277	6,277

<b>Panel B: Not Married</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.51*** ( 0.17)	-0.08 ( 0.08)	0.08 ( 0.18)	0.53*** ( 0.13)	0.27 ( 0.32)	0.11 ( 0.09)	-0.44** ( 0.21)	-0.04 ( 0.05)	-0.05 ( 0.05)	0.14* ( 0.08)
Summer Mean	8.64	0.93	2.55	1.04	4.59	0.19	3.57	0.86	0.17	1.26
Observations	3,065	3,065	3,065	3,065	3,065	3,065	3,065	3,065	3,065	3,065

Notes: Time is reported in hours. This table considers women age 25-55 with at least one child age 6-17 in the household. It considers only weekdays. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start, this takes value 1 for weeks after the start of school; for summer start, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together. Panel A (B) is for women not employed (employed) as of the last CPS interview, and Panel C (D) is for women with a household income below (at least) \$50,000 as of the last CPS interview. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded, as are days more than 9 weeks away from the week of the school start or summer start. "Y Mean" corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.



Table A15: Women with At Least One Child Age 6-17, Free Time, by Presence of Others

Panel A: No Restriction on Presence of Others										
	All	Free Time	Screen	Other Relax	Socializing	Volunteer	Telephone	Attend Arts	Religious	Watch Sports
School	0.41*** (0.14)	-0.42*** (0.11)	-0.27*** (0.09)	-0.04 (0.04)	-0.12** (0.05)	0.08** (0.03)	0.01 (0.02)	-0.07*** (0.02)	-0.02 (0.02)	0.01 (0.01)
Summer Mean	12.72	3.41	1.88	0.52	0.61	0.12	0.09	0.12	0.06	0.01
Observations	9,342	9,342	9,342	9,342	9,342	9,342	9,342	9,342	9,342	9,342

Panel B: With adults										
	All	Free Time	Screen	Other Relax	Socializing	Volunteer	Telephone	Attend Arts	Religious	Watch Sports
School	0.12 (0.17)	-0.08 (0.09)	0.01 (0.06)	0.00 (0.03)	-0.11** (0.05)	0.06** (0.02)	-0.00 (0.00)	-0.04** (0.02)	-0.00 (0.01)	0.00 (0.01)
Summer Mean	5.07	1.59	0.67	0.16	0.58	0.06	0.01	0.07	0.03	0.01
Observations	9,342	9,342	9,342	9,342	9,342	9,342	9,342	9,342	9,342	9,342

Panel C: With children										
	All	Free Time	Screen	Other Relax	Socializing	Volunteer	Telephone	Attend Arts	Religious	Watch Sports
School	-0.60*** (0.17)	-0.50*** (0.08)	-0.32*** (0.06)	-0.05* (0.03)	-0.11** (0.04)	0.05** (0.02)	-0.01 (0.01)	-0.07*** (0.02)	-0.00 (0.01)	0.01 (0.01)
Summer Mean	5.95	1.73	0.97	0.18	0.35	0.06	0.03	0.11	0.03	0.01
Observations	9,342	9,342	9,342	9,342	9,342	9,342	9,342	9,342	9,342	9,342

Panel D: Alone										
	All	Free Time	Screen	Other Relax	Socializing	Volunteer	Telephone	Attend Arts	Religious	Watch Sports
School	0.63*** (0.14)	0.01 (0.07)	-0.02 (0.06)	0.01 (0.03)	0.00 (0.01)	0.00 (0.01)	0.02* (0.01)	-0.00* (0.00)	-0.01 (0.01)	-0.00 (0.00)
Summer Mean	3.76	0.94	0.58	0.23	0.00	0.04	0.06	0.00	0.02	0.00
Observations	9,342	9,342	9,342	9,342	9,342	9,342	9,342	9,342	9,342	9,342

Notes: Time is reported in hours. This table considers weekdays only. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start, this takes value 1 for weeks after the start of school; for summer start, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together. All panels consider women age 25-55 with at least one child age 6-17 in the household. Panel A does not limit by who one is with, Panel B limits to being with categories of people likely to be adults, Panel C limits to being with children, and Panel D limits to alone time. Panels B and C can overlap. The first column considers all time categories. Only time categories for which the *who were you with* question are asked are displayed; this excludes categories such as sleep. The second column limits to free time, and the remaining columns are mutually exclusive subcategories of free time. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded, as are days more than 9 weeks away from the week of the school start or summer start. "Y Mean" corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. We create the categories as follows: Screen: 120303, 120307, and 120308. Other relaxing time: 120301, 120302, 120305, 120306, 120309-120313, 120399, 120503, 120599, and 129999. Note that it is unclear to which category 120599 and 129999 best fit; we place them here. Socializing: 120101-120299, 120501, and 120502. Volunteer: 150101-159989. Telephone: 160101-169989. Attending arts: 120401-120499, and 120504. Religious: 140101-149999 and 120304. Watching sports: 130201-130299, 130302, and 130402. Free time is the sum of all of these categories. \*\*\* 0.01; \*\* 0.05; \* 0.1.

Table A16: Women with At Least One Child Age 6-17, Free Time, with Partner

<b>Panel A: With spouse or partner, not conditional on marital status</b>										
	All	Free Time	Screen	Other Relax	Socializing	Volunteer	Telephone	Attend Arts	Religious	Watch Sports
School	-0.15 (0.12)	-0.10 (0.07)	-0.04 (0.05)	-0.01 (0.02)	-0.02 (0.03)	-0.01 (0.01)	-0.01** (0.00)	-0.02 (0.01)	-0.00 (0.01)	0.01 (0.01)
Summer Mean	2.15	0.98	0.57	0.11	0.22	0.02	0.01	0.04	0.02	0.00
Observations	9,342	9,342	9,342	9,342	9,342	9,342	9,342	9,342	9,342	9,342

<b>Panel B: With spouse or partner, conditional on being married</b>										
	All	Free Time	Screen	Other Relax	Socializing	Volunteer	Telephone	Attend Arts	Religious	Watch Sports
School	-0.26* (0.15)	-0.15* (0.09)	-0.05 (0.07)	-0.02 (0.03)	-0.04 (0.04)	-0.01 (0.01)	-0.01** (0.00)	-0.03 (0.02)	-0.01 (0.01)	0.01 (0.01)
Summer Mean	3.03	1.38	0.79	0.16	0.31	0.02	0.01	0.05	0.02	0.01
Observations	6,277	6,277	6,277	6,277	6,277	6,277	6,277	6,277	6,277	6,277

*Notes:* Time is reported in hours. This table considers weekdays only. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start, this takes value 1 for weeks after the start of school; for summer start, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together. All panels consider women age 25-55 with at least one child age 6-17 in the household. Panel A does being with one's spouse or partner and Panel B limits to being with one's spouse or partner and also to those who are married (spouse present or absent). The first column considers all time categories. Only time categories for which the *who were you with* question are asked are displayed; this excludes categories such as sleep. The second column limits to free time, and the remaining columns are mutually exclusive subcategories of free time. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded, as are days more than 9 weeks away from the week of the school start or summer start. "Y Mean" corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. We create the categories as follows: Screen: 120303, 120307, and 120308. Other relaxing time: 120301, 120302, 120305, 120306, 120309-120313, 120399, 120503, 120599, and 129999. Note that it is unclear to which category 120599 and 129999 best fit; we place them here. Socializing: 120101-120299, 120501, and 120502. Volunteer: 150101-159989. Telephone: 160101-169989. Attending arts: 120401-120499, and 120504. Religious: 140101-149999 and 120304. Watching sports: 130201-130299, 130302, and 130402. Free time is the sum of all of these categories. \*\*\* 0.01; \*\* 0.05; \* 0.1.

Table A17: Baseline: Weekdays, RDD Donut Hole Sensitivity, Women

Women with At Least One Child Age 6-17										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
Exclude Week 0	-0.43*** (0.08)	-0.05 (0.04)	0.15 (0.11)	0.59*** (0.08)	0.17 (0.18)	0.05 (0.04)	-0.41*** (0.11)	-0.06* (0.03)	-0.09*** (0.03)	0.08 (0.05)
Observations	9,342	9,342	9,342	9,342	9,342	9,342	9,342	9,342	9,342	9,342
Exclude Weeks [-1,1]	-0.42*** (0.11)	-0.00 (0.05)	0.05 (0.15)	0.64*** (0.10)	0.15 (0.23)	0.08 (0.05)	-0.41*** (0.14)	-0.05 (0.04)	-0.08** (0.04)	0.06 (0.06)
Observations	8,296	8,296	8,296	8,296	8,296	8,296	8,296	8,296	8,296	8,296
Exclude Weeks [-2,2]	-0.51*** (0.14)	0.08 (0.06)	-0.15 (0.18)	0.72*** (0.13)	0.55* (0.30)	0.05 (0.06)	-0.54*** (0.18)	-0.05 (0.05)	-0.10** (0.05)	-0.00 (0.08)
Observations	7,270	7,270	7,270	7,270	7,270	7,270	7,270	7,270	7,270	7,270

*Notes:* Time is reported in hours. Each row excludes a different bandwidth, measured in weeks. Week 0 refers to the day school begins (or ends); week -1 is the week before this week, and week 1 is the week after this week. The “Exclude Week 0” panel is what is used throughout the paper and replicates the results from the corresponding panel in Table 2. The sample is limited to women age 25-55 with at least one child age 6-17 in the household. This table considers weekdays only. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start, this takes value 1 for weeks after the start of school; for summer start, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded. “Y Mean” corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.

Table A18: Baseline: Weekdays, RDD Donut Hole Sensitivity, Women Control

	Women with No Children Age 3-18									
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
Exclude Week 0	-0.14 (0.11)	-0.01 (0.05)	0.05 (0.11)	0.16* (0.09)	-0.03 (0.21)	-0.01 (0.05)	0.03 (0.15)	-0.02 (0.04)	-0.04 (0.03)	0.04 (0.06)
Observations	7,959	7,959	7,959	7,959	7,959	7,959	7,959	7,959	7,959	7,959
Exclude Weeks [-1,1]	-0.16 (0.13)	0.02 (0.06)	0.05 (0.14)	0.14 (0.10)	0.04 (0.26)	0.01 (0.06)	0.02 (0.18)	-0.02 (0.05)	-0.04 (0.04)	-0.01 (0.08)
Observations	7,125	7,125	7,125	7,125	7,125	7,125	7,125	7,125	7,125	7,125
Exclude Weeks [-2,2]	-0.17 (0.17)	0.08 (0.08)	0.13 (0.18)	0.20 (0.14)	-0.30 (0.34)	0.03 (0.08)	0.16 (0.24)	-0.03 (0.06)	-0.07 (0.05)	0.01 (0.10)
Observations	6,273	6,273	6,273	6,273	6,273	6,273	6,273	6,273	6,273	6,273

*Notes:* Time is reported in hours. Each row excludes a different bandwidth, measured in weeks. Week 0 refers to the day school begins (or ends); week -1 is the week before this week, and week 1 is the week after this week. The “Exclude Week 0” panel is what is used throughout the paper and replicates the results from the corresponding panel in Table 2. The sample is limited to women age 25-55 with no children age 3-18 in the household. This table considers weekdays only. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start, this takes value 1 for weeks after the start of school; for summer start, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded. “Y Mean” corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.

Table A19: Baseline: Weekdays, RDD Donut Hole Sensitivity, Men

	Men with At Least One Child Age 6-17									
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
Exclude Week 0	-0.21**	-0.05	-0.02	0.13*	0.58**	0.00	-0.36***	-0.03	-0.08	0.05
	(0.10)	(0.04)	(0.10)	(0.07)	(0.21)	(0.03)	(0.13)	(0.04)	(0.05)	(0.07)
Observations	6,851	6,851	6,851	6,851	6,851	6,851	6,851	6,851	6,851	6,851
Exclude Weeks [-1,1]	-0.23*	-0.00	-0.07	0.12	0.59**	0.03	-0.43**	-0.03	-0.05	0.05
	(0.12)	(0.05)	(0.13)	(0.09)	(0.26)	(0.05)	(0.16)	(0.05)	(0.06)	(0.09)
Observations	6,115	6,115	6,115	6,115	6,115	6,115	6,115	6,115	6,115	6,115
Exclude Weeks [-2,2]	-0.29*	-0.05	0.01	0.15	0.50	0.04	-0.35	-0.02	-0.04	0.08
	(0.15)	(0.06)	(0.17)	(0.12)	(0.34)	(0.05)	(0.21)	(0.06)	(0.08)	(0.11)
Observations	5,357	5,357	5,357	5,357	5,357	5,357	5,357	5,357	5,357	5,357

*Notes:* Time is reported in hours. Each row excludes a different bandwidth, measured in weeks. Week 0 refers to the day school begins (or ends); week -1 is the week before this week, and week 1 is the week after this week. The “Exclude Week 0” panel is what is used throughout the paper and replicates the results from the corresponding panel in Table 2. The sample is limited to men age 25-55 with at least one child age 6-17 in the household. This table considers weekdays only. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start, this takes value 1 for weeks after the start of school; for summer start, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded. “Y Mean” corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.

Table A20: Baseline: Weekdays, RDD Donut Hole Sensitivity, Kids

	Children Age 15-17									
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
Exclude Week 0	-1.30*** (0.19)	0.17*** (0.05)	-0.68*** (0.11)	-0.14** (0.06)	-0.77*** (0.19)	5.55*** (0.24)	-2.03*** (0.26)	-0.08 (0.05)	-0.56*** (0.13)	-0.08 (0.09)
Observations	2,694	2,694	2,694	2,694	2,694	2,694	2,694	2,694	2,694	2,694
Exclude Weeks [-1,1]	-1.49*** (0.24)	0.20*** (0.07)	-0.84*** (0.14)	-0.14** (0.06)	-0.65*** (0.23)	6.34*** (0.27)	-2.51*** (0.32)	-0.04 (0.07)	-0.56*** (0.16)	-0.09 (0.12)
Observations	2,368	2,368	2,368	2,368	2,368	2,368	2,368	2,368	2,368	2,368
Exclude Weeks [-2,2]	-1.52*** (0.31)	0.22** (0.10)	-0.93*** (0.20)	-0.19** (0.09)	-0.71** (0.30)	6.75*** (0.35)	-2.50*** (0.43)	-0.10 (0.10)	-0.74*** (0.22)	-0.08 (0.17)
Observations	2,054	2,054	2,054	2,054	2,054	2,054	2,054	2,054	2,054	2,054

*Notes:* Time is reported in hours. Each row excludes a different bandwidth, measured in weeks. Week 0 refers to the day school begins (or ends); week -1 is the week before this week, and week 1 is the week after this week. The “Exclude Week 0” panel is what is used throughout the paper and replicates the results from the corresponding panel in Table 2. The sample is limited to children age 15-17. This table considers weekdays only. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start, this takes value 1 for weeks after the start of school; for summer start, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded. “Y Mean” corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.

Table A21: Agreement of Dates with Historical Dates

<b>Panel A: School Start Week, Percent Same as 2019</b>				
Year	% with Same Week	% Within [-1, 1] Week	% Within [-2, 2] Weeks	N
2003	31.09	91.19	98.47	1,113
2004	37.89	90.32	98.85	1,301
2005	41.29	95.76	99.63	1,085
2006	57.46	91.10	98.59	1,629
2007	64.29	90.72	98.60	1,638
2008	69.62	91.56	98.77	1,955
2009	52.06	95.05	98.92	1,940
2010	48.91	94.18	98.77	1,873
2011	46.43	93.87	98.93	1,861
2012	60.96	93.12	98.92	2,034
2013	68.45	92.14	97.75	2,761
2014	46.89	96.21	99.43	1,766
<b>Panel B: School End Week, Percent Same as 2020</b>				
Year	% with Same Week	% Within [-1, 1] Week	% Within [-2, 2] Weeks	N
2003	74.21	96.83	98.64	221
2004	58.82	94.94	99.42	692
2005	44.60	95.43	99.45	722
2006	52.55	96.55	99.59	725
2007	63.28	95.42	99.40	1,005
2008	63.64	95.45	99.41	1,012
2009	60.00	95.75	99.00	1,295
2010	59.64	96.39	98.98	1,276
2011	56.08	95.04	99.42	1,209
2012	61.97	95.58	99.08	1,199
2013	60.90	96.35	98.76	1,371
2014	57.86	91.43	98.52	2,100
2015	64.27	97.06	98.94	1,223

*Notes:* This table shows the percentage of historical districts that have a start date (Panel A) and end date (Panel B) that fall on the same week (Column 2), fall within one week (Column 3), or fall within two weeks (Column 4) of the start or end week of the same district in the 2019–2020 school year. We present results in calendar years, not school years, so 2003 in Panel A corresponds to the school start week in 2003 (the 2003-2004 school year), and 2003 in Panel B corresponds to the school end week in 2003 (the 2002-2003 school year). We consider Alabama, Alaska, Arkansas, California, District of Columbia, Idaho, Indiana, Maryland, Minnesota, Mississippi, New Hampshire, North Dakota, Oregon, Rhode Island, Tennessee, Utah, Wisconsin, and Wyoming.

Table A22: Baseline: Weekdays,  $\geq 90\%$  Agreement of School Start or End Date

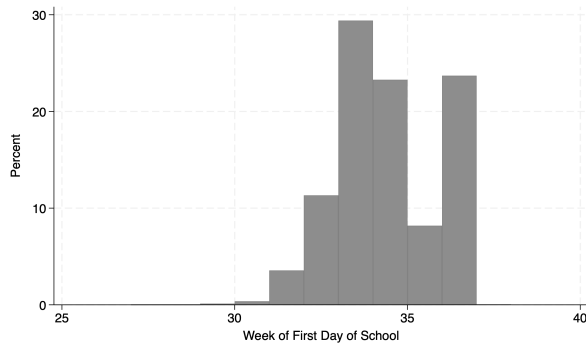
<b>Panel A: Women with At Least One Child Age 6-17</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.68*** (0.15)	-0.05 (0.07)	0.17 (0.19)	0.84*** (0.14)	-0.05 (0.33)	0.05 (0.06)	-0.29 (0.20)	-0.07 (0.05)	-0.12** (0.05)	0.13 (0.09)
Summer Mean	8.39	0.85	2.86	1.24	4.40	0.11	3.34	0.97	0.30	1.33
Observations	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989
<b>Panel B: Women with No Children Age 3-18</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.14 (0.19)	-0.04 (0.07)	0.20 (0.19)	0.22 (0.14)	-0.32 (0.37)	0.02 (0.10)	0.19 (0.26)	0.03 (0.07)	-0.04 (0.05)	-0.06 (0.11)
Summer Mean	8.38	0.91	2.18	0.59	5.26	0.16	3.86	0.99	0.23	1.29
Observations	2,660	2,660	2,660	2,660	2,660	2,660	2,660	2,660	2,660	2,660
<b>Panel C: Men with At Least One Child Age 6-17</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.06 (0.17)	0.04 (0.08)	0.29 (0.19)	0.32** (0.12)	-0.09 (0.37)	0.01 (0.05)	-0.34 (0.22)	0.00 (0.07)	-0.06 (0.07)	-0.06 (0.12)
Summer Mean	7.75	0.70	1.33	0.74	7.24	0.05	3.12	1.07	0.33	1.49
Observations	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165
<b>Panel D: Children Age 15-17</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-1.17*** (0.39)	0.14 (0.09)	-0.77*** (0.19)	-0.07 (0.08)	-0.59 (0.35)	5.75*** (0.42)	-2.40*** (0.47)	-0.16 (0.10)	-0.54** (0.25)	-0.14 (0.17)
Summer Mean	10.12	0.82	1.22	0.19	1.29	0.47	6.13	0.92	1.41	1.18
Observations	798	798	798	798	798	798	798	798	798	798

Notes: Time is reported in hours. This table considers weekdays only. It restricts to observations for which the level of agreement of the school start (or end) date at the observation's level of geography is at least 90%. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start, this takes value 1 for weeks after the start of school; for summer start, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together. Panel A (C) is for women (men) age 25-55 with at least one child age 6-17 in the household, Panel B is for women age 25-55 with no children age 3-18 in the household, and Panel D is for children age 15-17. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded, as are days more than 9 weeks away from the week of the school start or summer start. "Y Mean" corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.

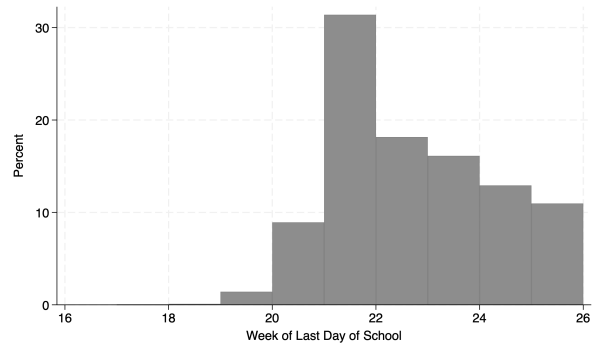


## **B Appendix Figures**

Figure A1: Distribution of School Start and Summer Start Weeks



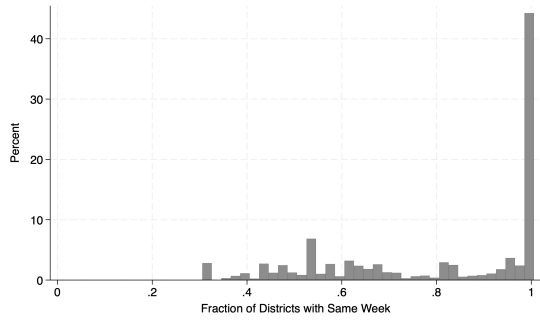
(a) School Start Week



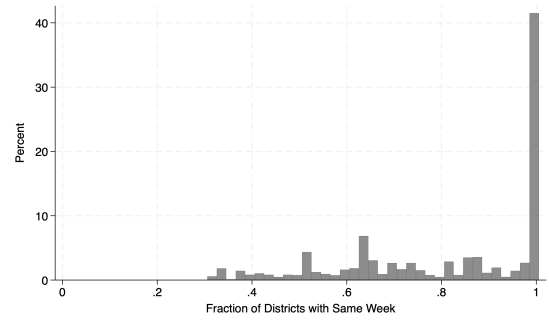
(b) Summer Start Week

Notes: These graphs show the distribution of school start week (Panel A) and summer start week (Panel B). We do not weight by student population or restrict to school districts that are used in constructing our dataset.

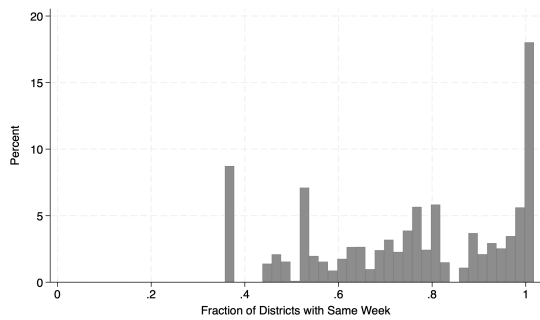
Figure A2: Histogram of Percentage of Districts with Same School and Summer Start Weeks, by Geography



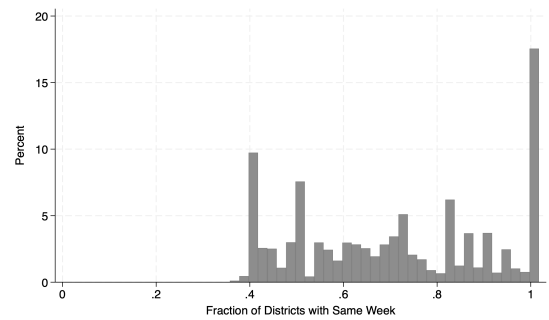
(a) County, School Start



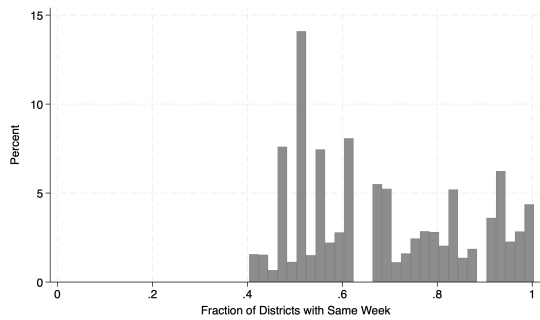
(b) County, Summer



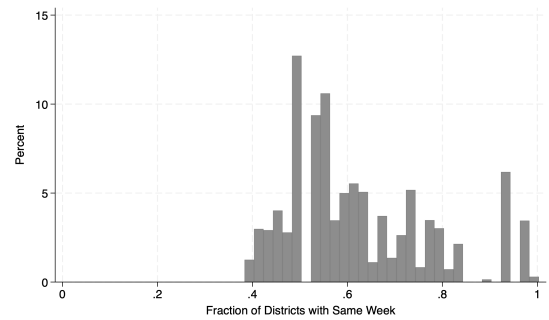
(c) CBSA, School Start



(d) CBSA, Summer



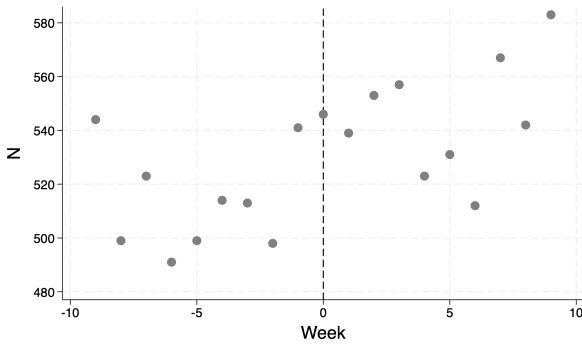
(e) State, School Start



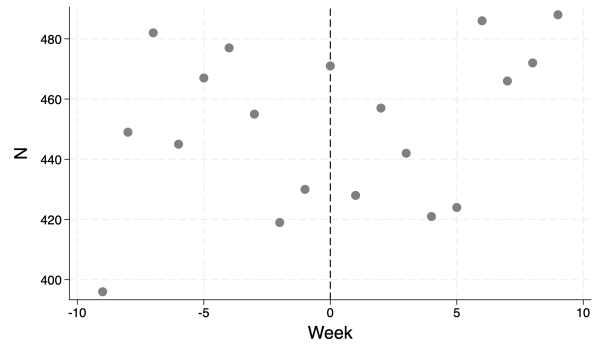
(f) State, Summer

Notes: These graphs show histograms of the percentage of school districts that share the same school start or summer start week (weighted by student population), where the school start or summer start week refers to the most-commonly occurring week. The left (right) columns are for school (summer) start. Panels A and B are for observations for which the school (summer) start week is determined by districts within county, with Panels C and D corresponding to the CBSA-level, and E and F corresponding to state-level. The sample (before restricting to county, CBSA, and state limits to individuals between the ages of 15-17 or 25-55. Each observation is an individual, and the sample is limited to those between the ages of 15-17 and 25-55, with holidays excluded as well as individuals working in elementary and secondary schools. However, we do not limit based on an individual's children. An individual contributes only to one geography. A value of 1 means that 100% of districts in one's geography share the same school (summer) start week.

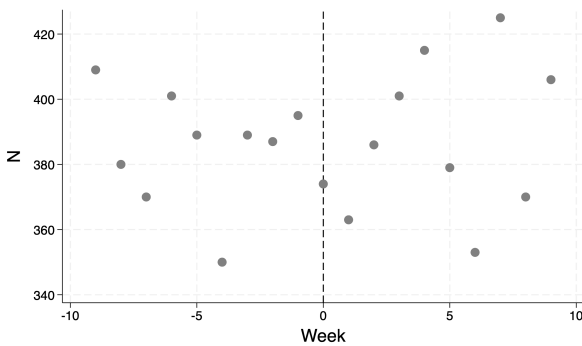
Figure A3: Density Plots



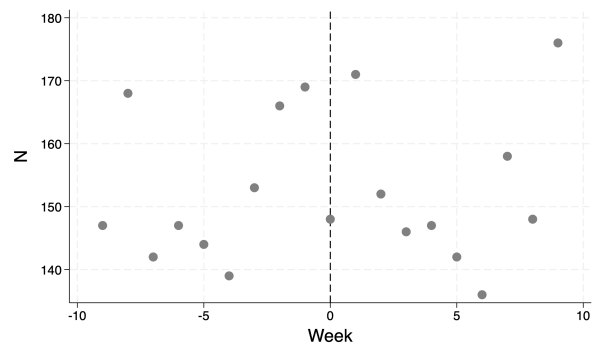
(a) Women with At Least One Child Age 6-17



(b) Women with No Children Age 3-18



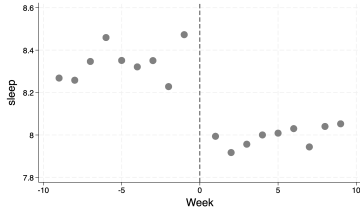
(c) Men with At Least One Child Age 6-17



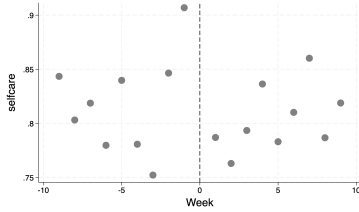
(d) Children Age 15-17

Notes: These graphs show the number of observations, binned at the weekly level. All observations are for weekdays. Panels a, b, c, and d are The Women with At Least One Child Age 6-17 sample, the Women with No Children Age 3-18 sample, the Men with At Least One Child Age 6-17 sample, and the Children Age 15-17 sample, respectively. We did not exclude holidays or the few observations that would be both treated and control in the stacked RDD analysis. that overlap, as we do elsewhere. The week of school start/summer start is indicated with the dashed vertical line.

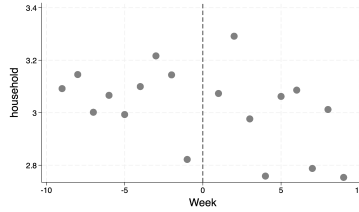
Figure A4: Women with At Least One Child Age 6-17, Weekdays



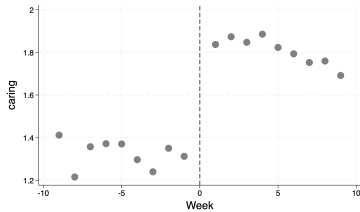
(a) Sleep



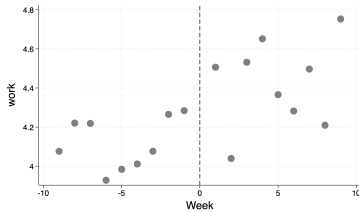
(b) Self-care



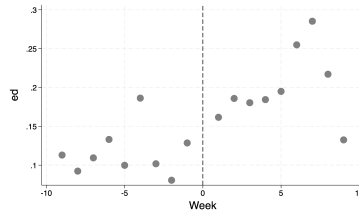
(c) Household



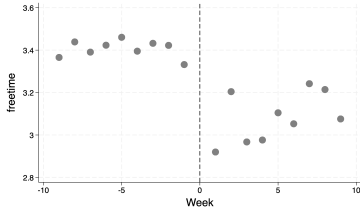
(d) Caring for Others



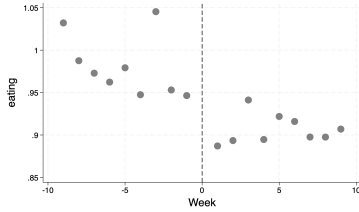
(e) Work



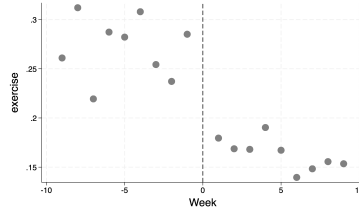
(f) Education



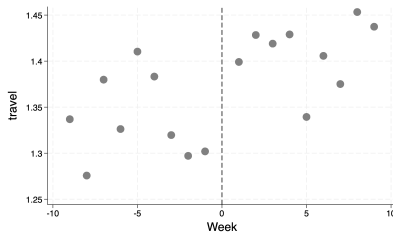
(g) Free Time



(h) Eating



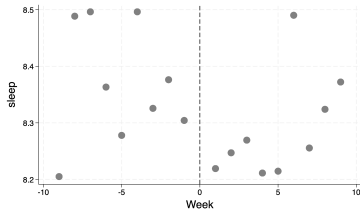
(i) Exercise



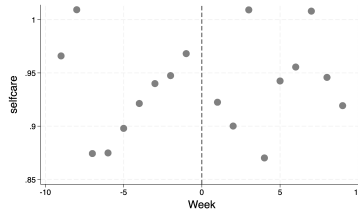
(j) Travel

Notes: Time is reported in hours. These graphs are for weekdays for the Women with At Least One Child Age 6-17 sample. Each graph is a different outcome. The data is the stacked version. Daily observations are binned at the weekly level. The week of school start/summer start is omitted and is indicated with the dashed vertical line.

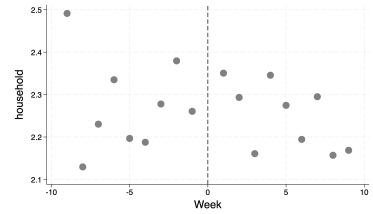
Figure A5: Women with No Children Age 3-18, Weekdays



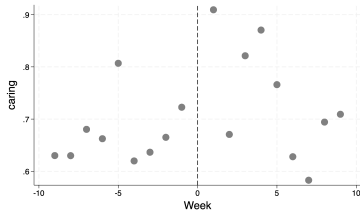
(a) Sleep



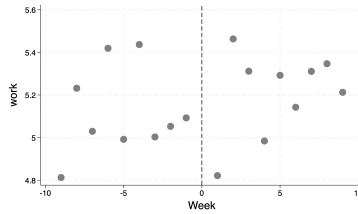
(b) Self-care



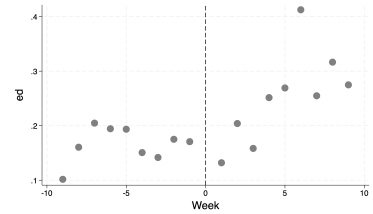
(c) Household



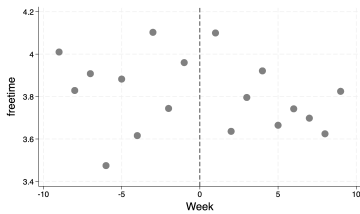
(d) Caring for Others



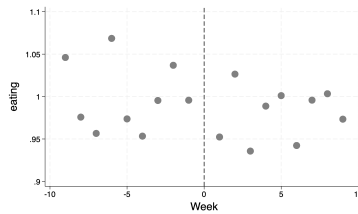
(e) Work



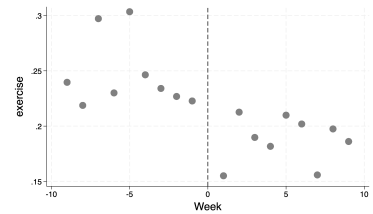
(f) Education



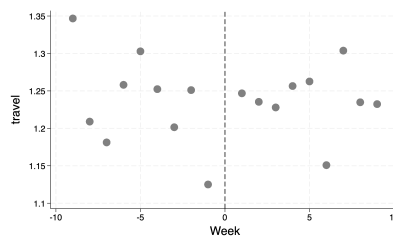
(g) Free Time



(h) Eating



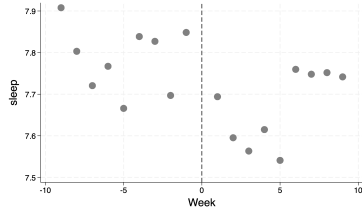
(i) Exercise



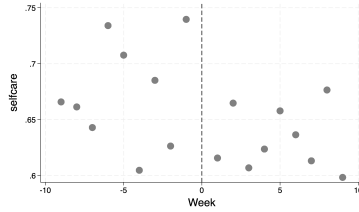
(j) Travel

Notes: Time is reported in hours. These graphs are for weekdays for the Women with No Child Age 3-18 sample. Each graph is a different outcome. The data is the stacked version. Daily observations are binned at the weekly level. The week of school start/summer start is omitted and is indicated with the dashed vertical line.

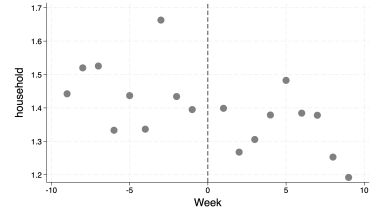
Figure A6: Men with At Least One Child Age 6-17, Weekdays



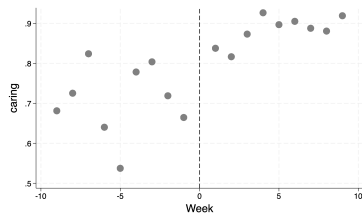
(a) Sleep



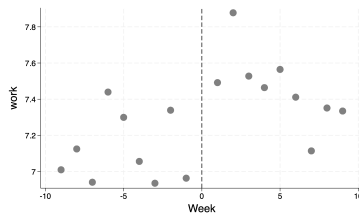
(b) Self-care



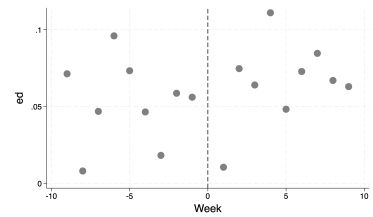
(c) Household



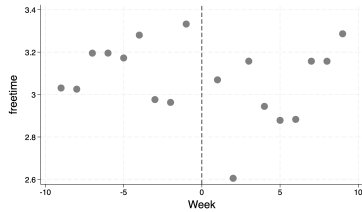
(d) Caring for Others



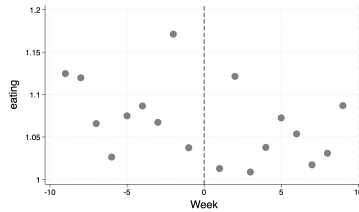
(e) Work



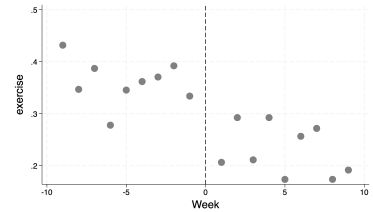
(f) Education



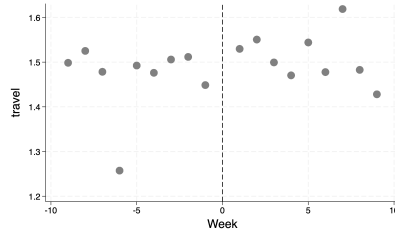
(g) Free Time



(h) Eating



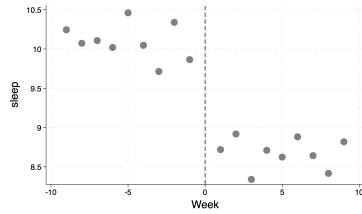
(i) Exercise



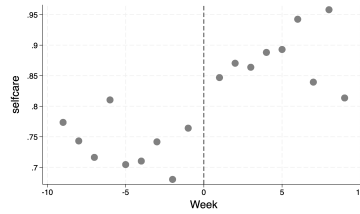
(j) Travel

Notes: Time is reported in hours. These graphs are for weekdays for the Men with At Least One Child Age 6-17 sample. Each graph is a different outcome. The data is the stacked version. Daily observations are binned at the weekly level. The week of school start/summer start is omitted and is indicated with the dashed vertical line.

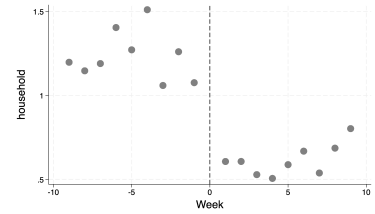
Figure A7: Children Age 15-17, Weekdays



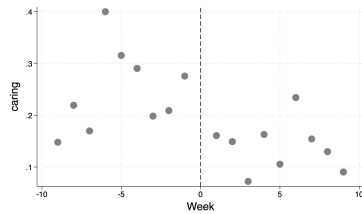
(a) Sleep



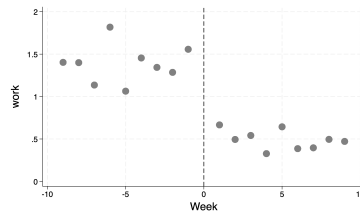
(b) Self-care



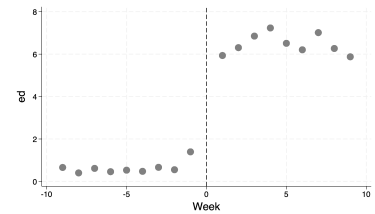
(c) Household



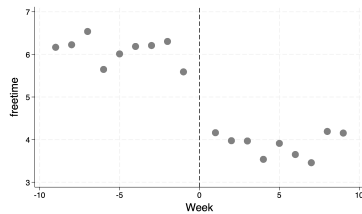
(d) Caring for Others



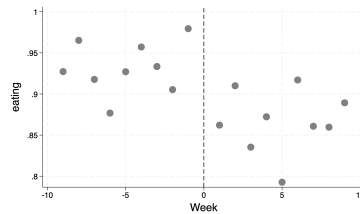
(e) Work



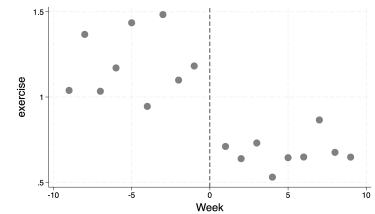
(f) Education



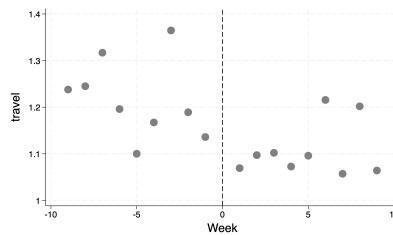
(g) Free Time



(h) Eating



(i) Exercise



(j) Travel

Notes: Time is reported in hours. These graphs are for weekdays for the Children Age 15-17 sample. Each graph is a different outcome. The data is the stacked version. Daily observations are binned at the weekly level. The week of school start/summer start is omitted and is indicated with the dashed vertical line.



## Data Appendix: Time Use Categorization

Here we detail how we created the ten broad categories of time use. The ten categories are mutually exclusive and nearly comprehensive (meaning that they overall nearly add up to 24 hours). The exception is that there is an “other” category that includes situations such as coding errors. We do not include “other” in the paper. All of the below come from the “Summary” file, which totals the amount spent for each of the individual categories. We report both the variable name and label.

### *1) Sleep:*

t010101 Sleeping

t010102 Sleeplessness

t010199 Sleeping, n.e.c.\* [Here and elsewhere, “n.e.c.” means not elsewhere classified.]

### *2) Self Care*

t010201 Washing, dressing and grooming oneself

t010299 Grooming, n.e.c.\*

t010301 Health-related self care

t010399 Self care, n.e.c.\*

t010401 Personal/Private activities

t010499 Personal activities, n.e.c.\*

t010501 Personal emergencies

t010599 Personal care emergencies, n.e.c.\*

t019999 Personal care, n.e.c.\*

### *3) Household Tasks, Shopping, and Civic*

t020101 Interior cleaning

t020102 Laundry

t020103 Sewing, repairing, & maintaining textiles

t020104 Storing interior hh items, inc. food

t020199 Housework, n.e.c.\*

t020201 Food and drink preparation

t020202 Food presentation

t020203 Kitchen and food clean-up

t020299 Food & drink prep, presentation, & clean-up, n.e.c.\*

t020301 Interior arrangement, decoration, & repairs

t020302 Building and repairing furniture

t020303 Heating and cooling

t020399 Interior maintenance, repair, & decoration, n.e.c.\*

t020401 Exterior cleaning

t020402 Exterior repair, improvements, & decoration

t020499 Exterior maintenance, repair & decoration, n.e.c.\*

t020501 Lawn, garden, and houseplant care

t020502 Ponds, pools, and hot tubs

t020599 Lawn and garden, n.e.c.\*

t020681 Care for animals and pets (not veterinary care)

t020699 Pet and animal care, n.e.c.\*

t020701 Vehicle repair and maintenance (by self)

t020799 Vehicles, n.e.c.\*  
t020801 Appliance, tool, and toy set-up, repair, & maintenance (by self)  
t020899 Appliances and tools, n.e.c.\*  
t020901 Financial management  
t020902 Household & personal organization and planning  
t020903 HH & personal mail & messages (except e-mail)  
t020904 HH & personal e-mail and messages  
t020905 Home security  
t020999 Household management, n.e.c.\*  
t029999 Household activities, n.e.c.\*  
t070101 Grocery shopping  
t070102 Purchasing gas  
t070103 Purchasing food (not groceries)  
t070104 Shopping, except groceries, food and gas  
t070105 Waiting associated with shopping  
t070199 Shopping, n.e.c.\*  
t070201 Comparison shopping  
t070299 Researching purchases, n.e.c.\*  
t070301 Security procedures rel. to consumer purchases  
t070399 Security procedures rel. to consumer purchases, n.e.c.\*  
t079999 Consumer purchases, n.e.c.\*  
t080101 Using paid childcare services  
t080102 Waiting associated w/purchasing childcare svcs  
t080199 Using paid childcare services, n.e.c.\*  
t080201 Banking  
t080202 Using other financial services  
t080203 Waiting associated w/banking/financial services  
t080299 Using financial services and banking, n.e.c.\*  
t080301 Using legal services  
t080302 Waiting associated with legal services  
t080399 Using legal services, n.e.c.\*  
t080401 Using health and care services outside the home  
t080402 Using in-home health and care services  
t080403 Waiting associated with medical services  
t080499 Using medical services, n.e.c.\*  
t080501 Using personal care services  
t080502 Waiting associated w/personal care services  
t080599 Using personal care services, n.e.c.\*  
t080601 Activities rel. to purchasing/selling real estate  
t080602 Waiting associated w/purchasing/selling real estate  
t080699 Using real estate services, n.e.c.\*  
t080701 Using veterinary services  
t080702 Waiting associated with veterinary services  
t080799 Using veterinary services, n.e.c.\*  
t080801 Security procedures rel. to professional/personal svcs.  
t080899 Security procedures rel. to professional/personal svcs n.e.c.\*  
t089999 Professional and personal services, n.e.c.\*  
t090101 Using interior cleaning services  
t090102 Using meal preparation services  
t090103 Using clothing repair and cleaning services  
t090104 Waiting associated with using household services  
t090199 Using household services, n.e.c.\*  
t090201 Using home maint/repair/decor/construction svcs  
t090202 Waiting associated w/ home main/repair/decor/constr  
t090299 Using home maint/repair/decor/constr services, n.e.c.\*  
t090301 Using pet services

t090302 Waiting associated with pet services  
t090399 Using pet services, n.e.c.\*  
t090401 Using lawn and garden services  
t090402 Waiting associated with using lawn & garden services  
t090499 Using lawn and garden services, n.e.c.\*  
t090501 Using vehicle maintenance or repair services  
t090502 Waiting associated with vehicle main. or repair svcs  
t090599 Using vehicle maint. & repair svcs, n.e.c.\*  
t099999 Using household services, n.e.c.\*  
t100101 Using police and fire services  
t100102 Using social services  
t100103 Obtaining licenses & paying fines, fees, taxes  
t100199 Using government services, n.e.c.\*  
t100201 Civic obligations & participation  
t100299 Civic obligations & participation, n.e.c.\*  
t100381 Waiting associated w/ using government services  
t100383 Waiting associated w/civic obligations & participation  
t100399 Waiting assoc. w/govt svcs or civic obligations, n.e.c.\*  
t100401 Security procedures rel. to govt svcs/civic obligations  
t100499 Security procedures rel. to govt svcs/civic obligations, n.e.c.\*  
t109999 Government services, n.e.c.\*

#### ***4) Caring for others***

t030101 Physical care for hh children  
t030102 Reading to/with hh children  
t030103 Playing with hh children, not sports  
t030104 Arts and crafts with hh children  
t030105 Playing sports with hh children  
t030108 Organization & planning for hh children  
t030109 Looking after hh children (as a primary activity)  
t030110 Attending hh children's events  
t030111 Waiting for/with hh children  
t030112 Picking up/dropping off hh children  
t030186 Talking with/listening to hh children  
t030199 Caring for & helping hh children, n.e.c.\*  
t030201 Homework (hh children)  
t030202 Meetings and school conferences (hh children)  
t030203 Home schooling of hh children  
t030204 Waiting associated with hh children's education  
t030299 Activities related to hh child's education, n.e.c.\*  
t030301 Providing medical care to hh children  
t030302 Obtaining medical care for hh children  
t030303 Waiting associated with hh children's health  
t030399 Activities related to hh child's health, n.e.c.\*  
t030401 Physical care for hh adults  
t030402 Looking after hh adult (as a primary activity)  
t030403 Providing medical care to hh adult  
t030404 Obtaining medical and care services for hh adult  
t030405 Waiting associated with caring for household adults  
t030499 Caring for household adults, n.e.c.\*  
t030501 Helping hh adults  
t030502 Organization & planning for hh adults  
t030503 Picking up/dropping off hh adult  
t030504 Waiting associated with helping hh adults  
t030599 Helping household adults, n.e.c.\*  
t039999 Caring for & helping hh members, n.e.c.\*

t040101 Physical care for nonhh children  
t040102 Reading to/with nonhh children  
t040103 Playing with nonhh children, not sports  
t040104 Arts and crafts with nonhh children  
t040105 Playing sports with nonhh children  
t040108 Organization & planning for nonhh children  
t040109 Looking after nonhh children (as primary activity)  
t040110 Attending nonhh children's events  
t040111 Waiting for/with nonhh children  
t040112 Dropping off/picking up nonhh children  
t040186 Talking with/listening to nonhh children  
t040199 Caring for and helping nonhh children, n.e.c.\*  
t040201 Homework (nonhh children)  
t040202 Meetings and school conferences (nonhh children)  
t040203 Home schooling of nonhh children  
t040204 Waiting associated with nonhh children's education  
t040299 Activities related to nonhh child's educ., n.e.c.\*  
t040301 Providing medical care to nonhh children  
t040302 Obtaining medical care for nonhh children  
t040303 Waiting associated with nonhh children's health  
t040399 Activities related to nonhh child's health, n.e.c.\*  
t040401 Physical care for nonhh adults  
t040402 Looking after nonhh adult (as a primary activity)  
t040403 Providing medical care to nonhh adult  
t040404 Obtaining medical and care services for nonhh adult  
t040405 Waiting associated with caring for nonhh adults  
t040499 Caring for nonhh adults, n.e.c.\*  
t040501 Housework, cooking, & shopping assistance for nonhh adults  
t040502 House & lawn maintenance & repair assistance for nonhh adults  
t040503 Animal & pet care assistance for nonhh adults  
t040504 Vehicle & appliance maintenance/repair assistance for nonhh adults  
t040505 Financial management assistance for nonhh adults  
t040506 Household management & paperwork assistance for nonhh adults  
t040507 Picking up/dropping off nonhh adult  
t040508 Waiting associated with helping nonhh adults  
t040599 Helping nonhh adults, n.e.c.\*  
t049999 Caring for & helping nonhh members, n.e.c.\*

### **5) Work**

t050101 Work, main job  
t050102 Work, other job(s)  
t050103 Security procedures related to work  
t050189 Working, n.e.c.\*  
t050201 Socializing, relaxing, and leisure as part of job  
t050202 Eating and drinking as part of job  
t050203 Sports and exercise as part of job  
t050204 Security procedures as part of job  
t050289 Work-related activities, n.e.c.\*  
t050301 Income-generating hobbies, crafts, and food  
t050302 Income-generating performances  
t050303 Income-generating services  
t050304 Income-generating rental property activities  
t050389 Other income-generating activities, n.e.c.\*  
t050403 Job interviewing  
t050404 Waiting associated with job search or interview  
t050405 Security procedures rel. to job search/interviewing

t050481 Job search activities  
t050499 Job search and Interviewing, n.e.c.\*  
t059999 Work and work-related activities, n.e.c.\*

#### **6) Education**

t060101 Taking class for degree, certification, or licensure  
t060102 Taking class for personal interest  
t060103 Waiting associated with taking classes  
t060104 Security procedures rel. to taking classes  
t060199 Taking class, n.e.c.\*  
t060201 Extracurricular club activities  
t060202 Extracurricular music & performance activities  
t060203 Extracurricular student government activities  
t060289 Education-related extracurricular activities, n.e.c.\*  
t060301 Research/homework for class for degree, certification, or licensure  
t060302 Research/homework for class for pers. interest  
t060303 Waiting associated with research/homework  
t060399 Research/homework n.e.c.\*  
t060401 Administrative activities: class for degree, certification, or licensure  
t060402 Administrative activities: class for personal interest  
t060403 Waiting associated w/admin. activities (education)  
t060499 Administrative for education, n.e.c.\*  
t069999 Education, n.e.c.\*

#### **7) Free time**

t120101 Socializing and communicating with others  
t120199 Socializing and communicating, n.e.c.\*  
t120201 Attending or hosting parties/receptions/ceremonies  
t120202 Attending meetings for personal interest (not volunteering)  
t120299 Attending/hosting social events, n.e.c.\*  
t120301 Relaxing, thinking  
t120302 Tobacco and drug use  
t120303 Television and movies (not religious)  
t120304 Television (religious)  
t120305 Listening to the radio  
t120306 Listening to/playing music (not radio)  
t120307 Playing games  
t120308 Computer use for leisure (exc. Games)  
t120309 Arts and crafts as a hobby  
t120310 Collecting as a hobby  
t120311 Hobbies, except arts & crafts and collecting  
t120312 Reading for personal interest  
t120313 Writing for personal interest  
t120399 Relaxing and leisure, n.e.c.\*  
t120401 Attending performing arts  
t120402 Attending museums  
t120403 Attending movies/film  
t120404 Attending gambling establishments  
t120405 Security procedures rel. to arts & entertainment  
t120499 Arts and entertainment, n.e.c.\*  
t120501 Waiting assoc. w/socializing & communicating  
t120502 Waiting assoc. w/attending/hosting social events  
t120503 Waiting associated with relaxing/leisure  
t120504 Waiting associated with arts & entertainment  
t120599 Waiting associated with socializing, n.e.c.\*  
t129999 Socializing, relaxing, and leisure, n.e.c.\*

t130201 Watching aerobics  
t130202 Watching baseball  
t130203 Watching basketball  
t130204 Watching biking  
t130205 Watching billiards  
t130206 Watching boating  
t130207 Watching bowling  
t130208 Watching climbing, spelunking, caving  
t130209 Watching dancing  
t130210 Watching equestrian sports  
t130211 Watching fencing  
t130212 Watching fishing  
t130213 Watching football  
t130214 Watching golfing  
t130215 Watching gymnastics  
t130216 Watching hockey  
t130217 Watching martial arts  
t130218 Watching racquet sports  
t130219 Watching rodeo competitions  
t130220 Watching rollerblading  
t130221 Watching rugby  
t130222 Watching running  
t130223 Watching skiing, ice skating, snowboarding  
t130224 Watching soccer  
t130225 Watching softball  
t130226 Watching vehicle touring/racing  
t130227 Watching volleyball  
t130228 Watching walking  
t130229 Watching water sports  
t130230 Watching weightlifting/strength training  
t130231 Watching people working out, unspecified  
t130232 Watching wrestling  
t130299 Attending sporting events, n.e.c.\*  
t130302 Waiting related to attending sporting events  
t130402 Security related to attending sporting events  
t140101 Attending religious services  
t140102 Participation in religious practices  
t140103 Waiting associated w/religious & spiritual activities  
t140104 Security procedures rel. to religious & spiritual activities  
t140105 Religious education activities  
t149999 Religious and spiritual activities, n.e.c.\*  
t150101 Computer use  
t150102 Organizing and preparing  
t150103 Reading  
t150104 Telephone calls (except hotline counseling)  
t150105 Writing  
t150106 Fundraising  
t150199 Administrative & support activities, n.e.c.\*  
t150201 Food preparation, presentation, clean-up  
t150202 Collecting & delivering clothing & other goods  
t150203 Providing care  
t150204 Teaching, leading, counseling, mentoring  
t150299 Social service & care activities, n.e.c.\*  
t150301 Building houses, wildlife sites, & other structures  
t150302 Indoor & outdoor maintenance, repair, & clean-up  
t150399 Indoor & outdoor maintenance, building & clean-up activities, n.e.c.\*

t150401 Performing  
t150402 Serving at volunteer events & cultural activities  
t150499 Participating in performance & cultural activities, n.e.c.\*  
t150501 Attending meetings, conferences, & training  
t150599 Attending meetings, conferences, & training, n.e.c.\*  
t150601 Public health activities  
t150602 Public safety activities  
t150699 Public health & safety activities, n.e.c.\*  
t159989 Volunteer activities, n.e.c.\*  
t160101 Telephone calls to/from family members  
t160102 Telephone calls to/from friends, neighbors, or acquaintances  
t160103 Telephone calls to/from education services providers  
t160104 Telephone calls to/from salespeople  
t160105 Telephone calls to/from professional or personal care svcs providers  
t160106 Telephone calls to/from household services providers  
t160107 Telephone calls to/from paid child or adult care providers  
t160108 Telephone calls to/from government officials  
t169989 Telephone calls, n.e.c.\*

### **8) Eating**

t110101 Eating and drinking  
t110199 Eating and drinking, n.e.c.\*  
t110281 Waiting associated w/eating & drinking  
t110289 Waiting associated with eating & drinking, n.e.c.\*  
t119999 Eating and drinking, n.e.c.\*

### **9) Exercise**

t130101 Doing aerobics  
t130102 Playing baseball  
t130103 Playing basketball  
t130104 Biking  
t130105 Playing billiards  
t130106 Boating  
t130107 Bowling  
t130108 Climbing, spelunking, caving  
t130109 Dancing  
t130110 Participating in equestrian sports  
t130111 Fencing  
t130112 Fishing  
t130113 Playing football  
t130114 Golfing  
t130115 Doing gymnastics  
t130116 Hiking  
t130117 Playing hockey  
t130118 Hunting  
t130119 Participating in martial arts  
t130120 Playing racquet sports  
t130121 Participating in rodeo competitions  
t130122 Rollerblading  
t130123 Playing rugby  
t130124 Running  
t130125 Skiing, ice skating, snowboarding  
t130126 Playing soccer  
t130127 Softball  
t130128 Using cardiovascular equipment  
t130129 Vehicle touring/racing

t130130 Playing volleyball  
t130131 Walking  
t130132 Participating in water sports  
t130133 Weightlifting/strength training  
t130134 Working out, unspecified  
t130135 Wrestling  
t130136 Doing yoga  
t130199 Playing sports n.e.c.\*  
t130301 Waiting related to playing sports or exercising  
t130399 Waiting associated with sports, exercise, & recreation, n.e.c.\*  
t130401 Security related to playing sports or exercising  
t130499 Security related to sports, exercise, & recreation, n.e.c.\*  
t139999 Sports, exercise, & recreation, n.e.c.\*

#### ***10) Travel***

t180101 Travel related to personal care  
t180199 Travel related to personal care, n.e.c.\*  
t180280 Travel related to household activities  
t180381 Travel related to caring for and helping hh children  
t180382 Travel related to caring for and helping hh adults  
t180399 Travel rel. to caring for & helping hh members, n.e.c.\*  
t180481 Travel related to caring for and helping nonhh children  
t180482 Travel related to caring for and helping nonhh adults  
t180499 Travel rel. to caring for & helping nonhh members, n.e.c.\*  
t180501 Travel related to working  
t180502 Travel related to work-related activities  
t180589 Travel related to work, n.e.c.\*  
t180601 Travel related to taking class  
t180682 Travel related to education (except taking class)  
t180699 Travel related to education, n.e.c.\*  
t180701 Travel related to grocery shopping  
t180782 Travel related to shopping (except grocery shopping)  
t180801 Travel related to using childcare services  
t180802 Travel related to using financial services and banking  
t180803 Travel related to using legal services  
t180804 Travel related to using medical services  
t180805 Travel related to using personal care services  
t180806 Travel related to using real estate services  
t180807 Travel related to using veterinary services  
t180899 Travel rel. to using prof. & personal care services, n.e.c.\*  
t180901 Travel related to using household services  
t180902 Travel related to using home main./repair/decor./construction svcs  
t180903 Travel related to using pet services (not vet)  
t180904 Travel related to using lawn and garden services  
t180905 Travel related to using vehicle maintenance & repair services  
t180999 Travel related to using household services, n.e.c.\*  
t181002 Travel related to civic obligations & participation  
t181081 Travel related to using government services  
t181099 Travel rel. to govt svcs & civic obligations, n.e.c.\*  
t181101 Travel related to eating and drinking  
t181199 Travel related to eating and drinking, n.e.c.\*  
t181201 Travel related to socializing and communicating  
t181202 Travel related to attending or hosting social events  
t181204 Travel related to arts and entertainment  
t181283 Travel related to relaxing and leisure  
t181299 Travel rel. to socializing, relaxing, & leisure, n.e.c.\*



t181301 Travel related to participating in sports/exercise/recreation  
t181302 Travel related to attending sporting/recreational events  
t181399 Travel related to sports, exercise, & recreation, n.e.c.\*  
t181401 Travel related to religious/spiritual practices  
t181499 Travel rel. to religious/spiritual activities, n.e.c.\*  
t181501 Travel related to volunteering  
t181599 Travel related to volunteer activities, n.e.c.\*  
t181601 Travel related to phone calls  
t181699 Travel rel. to phone calls, n.e.c.\*  
t181801 Security procedures related to traveling  
t181899 Security procedures related to traveling, n.e.c.\*  
t189999 Traveling, n.e.c.\*

***11) Other***

t500101 Insufficient detail in verbatim  
t500103 Missing travel or destination  
t500104 Recorded simultaneous activities incorrectly  
t500105 Respondent refused to provide information/none of your business  
t500106 Gap/can't remember  
t500107 Unable to code activity at 1st tier  
t509989 Data codes, n.e.c.\*

## A Web Appendix Tables

Table W1: Women, 25-55, at least one child 6-17 in HH, weekdays

Panel A: School Start										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.36*** (0.12)	-0.10* (0.06)	0.10 (0.16)	0.65*** (0.11)	0.17 (0.26)	0.05 (0.05)	-0.42** (0.16)	-0.04 (0.04)	-0.08** (0.04)	0.02 (0.07)
Summer Mean	8.33	0.82	3.06	1.35	4.13	0.11	3.38	0.98	0.27	1.35
Observations	4,583	4,583	4,583	4,583	4,583	4,583	4,583	4,583	4,583	4,583
Panel B: Summer Start										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.52*** (0.12)	-0.00 (0.06)	0.17 (0.16)	0.53*** (0.11)	0.21 (0.26)	0.07 (0.06)	-0.40** (0.16)	-0.07* (0.04)	-0.11** (0.05)	0.13* (0.07)
Summer Mean	8.34	0.82	3.07	1.30	4.11	0.12	3.43	0.98	0.27	1.32
Observations	4,759	4,759	4,759	4,759	4,759	4,759	4,759	4,759	4,759	4,759
Panel C: Stacked										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.43*** (0.08)	-0.05 (0.04)	0.15 (0.11)	0.59*** (0.08)	0.17 (0.18)	0.05 (0.04)	-0.41*** (0.11)	-0.06* (0.03)	-0.09*** (0.03)	0.08 (0.05)
Summer Mean	8.34	0.82	3.06	1.32	4.12	0.12	3.41	0.98	0.27	1.34
Observations	9,342	9,342	9,342	9,342	9,342	9,342	9,342	9,342	9,342	9,342

Notes: Time is reported in hours. This table considers weekdays only and is for women age 25-55 with at least one child age 6-17 in the household. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start in Panel A, this takes value 1 for weeks after the start of school; for summer start in Panel B, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together in Panel C. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded, as are days more than 9 weeks away from the week of the school start or summer start. "Y Mean" corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.

Table W2: Women, 25-55, no child 3-18 in HH, weekdays

<b>Panel A: School Start</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.02 ( 0.15)	-0.04 ( 0.08)	0.05 ( 0.17)	0.21* ( 0.12)	-0.13 ( 0.30)	-0.10 ( 0.06)	-0.03 ( 0.21)	-0.07 ( 0.05)	-0.04 ( 0.04)	0.22** ( 0.10)
Summer Mean	8.36	0.93	2.27	0.68	5.08	0.16	3.88	1.00	0.25	1.23
Observations	3,918	3,918	3,918	3,918	3,918	3,918	3,918	3,918	3,918	3,918

<b>Panel B: Summer Start</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.24 ( 0.15)	0.02 ( 0.07)	0.01 ( 0.16)	0.12 ( 0.12)	0.05 ( 0.30)	0.08 ( 0.07)	0.11 ( 0.21)	0.01 ( 0.05)	-0.06 ( 0.04)	-0.11 ( 0.09)
Summer Mean	8.39	0.93	2.27	0.66	5.17	0.17	3.79	1.00	0.25	1.24
Observations	4,041	4,041	4,041	4,041	4,041	4,041	4,041	4,041	4,041	4,041

<b>Panel C: Stacked</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.14 ( 0.11)	-0.01 ( 0.05)	0.05 ( 0.11)	0.16* ( 0.09)	-0.03 ( 0.21)	-0.01 ( 0.05)	0.03 ( 0.15)	-0.02 ( 0.04)	-0.04 ( 0.03)	0.04 ( 0.06)
Summer Mean	8.38	0.93	2.27	0.67	5.12	0.17	3.83	1.00	0.25	1.23
Observations	7,959	7,959	7,959	7,959	7,959	7,959	7,959	7,959	7,959	7,959

Notes: Time is reported in hours. This table considers weekdays only and is for women age 25-55 with no children age 3-18 in the household. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start in Panel A, this takes value 1 for weeks after the start of school; for summer start in Panel B, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together in Panel C. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded, as are days more than 9 weeks away from the week of the school start or summer start. "Y Mean" corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.

Table W3: Men, 25-55, at least one child 6-17 in HH, weekdays

<b>Panel A: School Start</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.11 ( 0.14)	-0.04 ( 0.06)	0.01 ( 0.14)	0.24** ( 0.09)	0.46 ( 0.30)	0.03 ( 0.05)	-0.53** ( 0.19)	-0.12** ( 0.06)	-0.07 ( 0.07)	0.11 ( 0.10)
Summer Mean	7.80	0.67	1.46	0.69	7.12	0.05	3.14	1.09	0.35	1.46
Observations	3,395	3,395	3,395	3,395	3,395	3,395	3,395	3,395	3,395	3,395

<b>Panel B: Summer Start</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.26* ( 0.13)	-0.04 ( 0.06)	-0.08 ( 0.14)	-0.00 ( 0.10)	0.74** ( 0.29)	-0.03 ( 0.04)	-0.22 ( 0.18)	0.06 ( 0.06)	-0.11 ( 0.08)	-0.02 ( 0.10)
Summer Mean	7.77	0.68	1.45	0.72	7.13	0.06	3.11	1.09	0.37	1.47
Observations	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456

<b>Panel C: Stacked</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.21** ( 0.10)	-0.05 ( 0.04)	-0.02 ( 0.10)	0.13* ( 0.07)	0.58** ( 0.21)	0.00 ( 0.03)	-0.36*** ( 0.13)	-0.03 ( 0.04)	-0.08 ( 0.05)	0.05 ( 0.07)
Summer Mean	7.79	0.68	1.45	0.71	7.12	0.05	3.13	1.09	0.36	1.47
Observations	6,851	6,851	6,851	6,851	6,851	6,851	6,851	6,851	6,851	6,851

Notes: Time is reported in hours. This table considers weekdays only and is for men age 25-55 with at least one child age 6-17 in the household. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start in Panel A, this takes value 1 for weeks after the start of school; for summer start in Panel B, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together in Panel C. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded, as are days more than 9 weeks away from the week of the school start or summer start. "Y Mean" corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.

Table W4: 15-17 Year Olds, Weekdays

<b>Panel A: School Start</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-1.42*** (0.28)	0.20** (0.07)	-0.59*** (0.16)	-0.03 (0.07)	-0.52* (0.27)	5.55*** (0.35)	-2.27*** (0.37)	-0.12 (0.07)	-0.64*** (0.19)	-0.09 (0.14)
Summer Mean	10.12	0.74	1.22	0.23	1.40	0.62	6.07	0.92	1.23	1.23
Observations	1,312	1,312	1,312	1,312	1,312	1,312	1,312	1,312	1,312	1,312

<b>Panel B: Summer Start</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-1.23*** (0.25)	0.15* (0.08)	-0.80*** (0.17)	-0.25*** (0.09)	-0.95*** (0.27)	5.55*** (0.33)	-1.78*** (0.36)	-0.03 (0.08)	-0.50*** (0.17)	-0.05 (0.11)
Summer Mean	10.07	0.74	1.24	0.26	1.37	0.67	6.12	0.95	1.16	1.20
Observations	1,382	1,382	1,382	1,382	1,382	1,382	1,382	1,382	1,382	1,382

<b>Panel C: Stacked</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-1.30*** (0.19)	0.17*** (0.05)	-0.68*** (0.11)	-0.14** (0.06)	-0.77*** (0.19)	5.55*** (0.24)	-2.03*** (0.26)	-0.08 (0.05)	-0.56*** (0.13)	-0.08 (0.09)
Summer Mean	10.09	0.74	1.23	0.25	1.39	0.65	6.10	0.93	1.20	1.22
Observations	2,694	2,694	2,694	2,694	2,694	2,694	2,694	2,694	2,694	2,694

Notes: Time is reported in hours. This table considers weekdays only and is for children age 15-17. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start in Panel A, this takes value 1 for weeks after the start of school; for summer start in Panel B, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together in Panel C. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded, as are days more than 9 weeks away from the week of the school start or summer start. "Y Mean" corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.

Table W5: Women, 25-55, at least one child 6-17 in HH, weekends

<b>Panel A: School Start</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	0.22*	0.02	0.20	0.31**	-0.26	0.07*	-0.23	-0.05	-0.09	-0.16*
	( 0.13)	( 0.06)	( 0.17)	( 0.11)	( 0.18)	( 0.04)	( 0.19)	( 0.06)	( 0.06)	( 0.08)
Summer Mean	9.20	0.79	3.59	1.11	1.15	0.07	4.98	1.17	0.41	1.34
Observations	4,914	4,914	4,914	4,914	4,914	4,914	4,914	4,914	4,914	4,914

<b>Panel B: Summer Start</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	0.02	0.04	-0.03	0.14	-0.16	0.02	0.38**	-0.08	-0.16**	-0.16*
	( 0.13)	( 0.06)	( 0.17)	( 0.11)	( 0.17)	( 0.05)	( 0.19)	( 0.06)	( 0.06)	( 0.09)
Summer Mean	9.19	0.79	3.59	1.12	1.14	0.08	4.96	1.18	0.39	1.35
Observations	4,908	4,908	4,908	4,908	4,908	4,908	4,908	4,908	4,908	4,908

<b>Panel C: Stacked</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	0.10	0.04	0.06	0.26***	-0.23*	0.05	0.09	-0.06	-0.13***	-0.15**
	( 0.09)	( 0.04)	( 0.11)	( 0.08)	( 0.12)	( 0.03)	( 0.13)	( 0.04)	( 0.04)	( 0.06)
Summer Mean	9.19	0.79	3.59	1.11	1.14	0.08	4.97	1.17	0.40	1.34
Observations	9,822	9,822	9,822	9,822	9,822	9,822	9,822	9,822	9,822	9,822

Notes: Time is reported in hours. This table considers weekends only and is for women age 25-55 with at least one child age 6-17 in the household. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start in Panel A, this takes value 1 for weeks after the start of school; for summer start in Panel B, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together in Panel C. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded, as are days more than 9 weeks away from the week of the school start or summer start. "Y Mean" corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.

Table W6: Women, 25-55, no child 3-18 in HH, weekends

<b>Panel A: School Start</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.20 ( 0.17)	-0.06 ( 0.07)	-0.08 ( 0.18)	0.08 ( 0.12)	0.11 ( 0.20)	0.07 ( 0.06)	0.20 ( 0.23)	0.02 ( 0.06)	-0.00 ( 0.06)	-0.12 ( 0.11)
Summer Mean	9.35	0.89	3.12	0.66	1.33	0.08	5.59	1.14	0.34	1.33
Observations	4,091	4,091	4,091	4,091	4,091	4,091	4,091	4,091	4,091	4,091

<b>Panel B: Summer Start</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	0.16 ( 0.16)	-0.00 ( 0.07)	0.03 ( 0.18)	-0.07 ( 0.12)	-0.13 ( 0.22)	0.01 ( 0.05)	-0.11 ( 0.23)	0.08 ( 0.07)	-0.05 ( 0.07)	0.09 ( 0.10)
Summer Mean	9.32	0.87	3.13	0.66	1.38	0.06	5.59	1.14	0.35	1.33
Observations	4,025	4,025	4,025	4,025	4,025	4,025	4,025	4,025	4,025	4,025

<b>Panel C: Stacked</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.02 ( 0.11)	-0.02 ( 0.05)	-0.02 ( 0.13)	0.00 ( 0.08)	0.01 ( 0.14)	0.03 ( 0.04)	0.01 ( 0.16)	0.06 ( 0.05)	-0.04 ( 0.05)	-0.00 ( 0.07)
Summer Mean	9.34	0.88	3.13	0.66	1.35	0.07	5.59	1.14	0.34	1.33
Observations	8,116	8,116	8,116	8,116	8,116	8,116	8,116	8,116	8,116	8,116

Notes: Time is reported in hours. This table considers weekends only and is for women age 25-55 with no children age 3-18 in the household. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start in Panel A, this takes value 1 for weeks after the start of school; for summer start in Panel B, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together in Panel C. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded, as are days more than 9 weeks away from the week of the school start or summer start. "Y Mean" corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.

Table W7: Men, 25-55, at least one child 6-17 in HH, weekends

<b>Panel A: School Start</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	0.02 ( 0.15)	-0.01 ( 0.05)	-0.04 ( 0.20)	0.11 ( 0.12)	-0.10 ( 0.26)	-0.01 ( 0.04)	0.39 ( 0.24)	-0.03 ( 0.07)	-0.26** ( 0.11)	-0.07 ( 0.12)
Summer Mean	8.86	0.54	2.82	0.84	1.78	0.04	5.34	1.31	0.73	1.54
Observations	3,531	3,531	3,531	3,531	3,531	3,531	3,531	3,531	3,531	3,531

<b>Panel B: Summer Start</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	0.04 ( 0.15)	0.03 ( 0.06)	-0.09 ( 0.22)	0.41*** ( 0.12)	0.04 ( 0.27)	0.02 ( 0.03)	-0.13 ( 0.25)	0.08 ( 0.07)	-0.11 ( 0.12)	-0.30** ( 0.13)
Summer Mean	8.91	0.54	2.87	0.81	1.74	0.04	5.31	1.28	0.72	1.57
Observations	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405

<b>Panel C: Stacked</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	0.04 ( 0.10)	0.02 ( 0.04)	0.00 ( 0.14)	0.29*** ( 0.08)	-0.04 ( 0.18)	-0.00 ( 0.02)	0.06 ( 0.17)	0.01 ( 0.05)	-0.21** ( 0.08)	-0.17* ( 0.09)
Summer Mean	8.89	0.54	2.85	0.83	1.76	0.04	5.33	1.29	0.73	1.55
Observations	6,936	6,936	6,936	6,936	6,936	6,936	6,936	6,936	6,936	6,936

Notes: Time is reported in hours. This table considers weekends only and is for men age 25-55 with at least one child age 6-17 in the household. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start in Panel A, this takes value 1 for weeks after the start of school; for summer start in Panel B, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together in Panel C. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded, as are days more than 9 weeks away from the week of the school start or summer start. "Y Mean" corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.



Table W8: 15-17 Year Olds, Weekends

<b>Panel A: School Start</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	0.25 (0.29)	0.02 (0.08)	-0.24 (0.22)	0.06 (0.10)	-0.18 (0.27)	0.54*** (0.16)	-0.05 (0.41)	0.00 (0.08)	-0.15 (0.24)	-0.22 (0.17)
Summer Mean	10.52	0.71	1.27	0.23	1.01	0.24	6.42	0.96	1.12	1.33
Observations	1,464	1,464	1,464	1,464	1,464	1,464	1,464	1,464	1,464	1,464

<b>Panel B: Summer Start</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.31 (0.29)	0.09 (0.08)	-0.03 (0.21)	-0.06 (0.10)	-0.14 (0.27)	0.66*** (0.16)	-0.50 (0.40)	-0.03 (0.09)	0.03 (0.23)	0.23 (0.16)
Summer Mean	10.44	0.71	1.23	0.24	1.07	0.24	6.52	0.97	1.12	1.28
Observations	1,410	1,410	1,410	1,410	1,410	1,410	1,410	1,410	1,410	1,410

<b>Panel C: Stacked</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	0.02 (0.20)	0.06 (0.06)	-0.14 (0.15)	0.00 (0.07)	-0.17 (0.18)	0.59*** (0.11)	-0.26 (0.27)	0.00 (0.06)	-0.06 (0.16)	-0.03 (0.11)
Summer Mean	10.48	0.71	1.25	0.23	1.04	0.24	6.47	0.97	1.12	1.31
Observations	2,874	2,874	2,874	2,874	2,874	2,874	2,874	2,874	2,874	2,874

Notes: Time is reported in hours. This table considers weekends only and is for children age 15-17. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start in Panel A, this takes value 1 for weeks after the start of school; for summer start in Panel B, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together in Panel C. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded, as are days more than 9 weeks away from the week of the school start or summer start. "Y Mean" corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.

Table W9: Women, 25-55, at least one child 6-17 in HH, Not Employed

<b>Panel A: School Start</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.52** ( 0.22)	-0.24* ( 0.13)	0.75** ( 0.30)	0.82*** ( 0.24)	-0.04 ( 0.25)	0.16 ( 0.13)	-0.71** ( 0.30)	-0.11 ( 0.07)	-0.07 ( 0.07)	-0.15 ( 0.14)
Summer Mean	8.89	0.70	4.31	2.02	0.77	0.13	4.32	1.03	0.30	1.24
Observations	1,478	1,478	1,478	1,478	1,478	1,478	1,478	1,478	1,478	1,478
<b>Panel B: Summer Start</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.72*** ( 0.22)	0.15 ( 0.11)	0.34 ( 0.30)	1.18*** ( 0.24)	-0.57** ( 0.24)	0.16 ( 0.16)	-0.41 ( 0.32)	-0.03 ( 0.08)	-0.04 ( 0.09)	0.05 ( 0.13)
Summer Mean	8.93	0.70	4.32	1.90	0.79	0.18	4.37	1.00	0.31	1.19
Observations	1,526	1,526	1,526	1,526	1,526	1,526	1,526	1,526	1,526	1,526
<b>Panel C: Stacked</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.62*** ( 0.15)	-0.06 ( 0.08)	0.53** ( 0.21)	1.03*** ( 0.17)	-0.33* ( 0.17)	0.15 ( 0.10)	-0.56** ( 0.22)	-0.07 ( 0.05)	-0.04 ( 0.06)	-0.03 ( 0.09)
Summer Mean	8.91	0.70	4.31	1.96	0.78	0.15	4.35	1.01	0.31	1.21
Observations	3,004	3,004	3,004	3,004	3,004	3,004	3,004	3,004	3,004	3,004

Notes: Time is reported in hours. This table considers weekdays only and is for women age 25-55 with at least one child age 6-17 in the household who were not employed as of the last CPS interview. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start in Panel A, this takes value 1 for weeks after the start of school; for summer start in Panel B, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together in Panel C. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded, as are days more than 9 weeks away from the week of the school start or summer start. "Y Mean" corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated.

\*\*\* 0.01; \*\* 0.05; \* 0.1.

Table W10: Women, 25-55, at least one child 6-17 in HH, Employed

<b>Panel A: School Start</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.27** ( 0.13)	-0.05 ( 0.06)	-0.17 ( 0.17)	0.56*** ( 0.11)	0.20 ( 0.29)	-0.01 ( 0.04)	-0.25 ( 0.18)	-0.01 ( 0.05)	-0.07 ( 0.05)	0.08 ( 0.08)
Summer Mean	8.07	0.88	2.46	1.02	5.73	0.10	2.93	0.96	0.26	1.40
Observations	3,105	3,105	3,105	3,105	3,105	3,105	3,105	3,105	3,105	3,105

<b>Panel B: Summer Start</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.41*** ( 0.14)	-0.06 ( 0.07)	0.17 ( 0.17)	0.26** ( 0.11)	0.45 ( 0.30)	0.03 ( 0.06)	-0.40** ( 0.17)	-0.09 ( 0.05)	-0.14** ( 0.05)	0.15* ( 0.08)
Summer Mean	8.06	0.88	2.46	1.01	5.72	0.10	2.97	0.97	0.25	1.39
Observations	3,233	3,233	3,233	3,233	3,233	3,233	3,233	3,233	3,233	3,233

<b>Panel C: Stacked</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.32*** ( 0.10)	-0.05 ( 0.04)	0.01 ( 0.12)	0.41*** ( 0.08)	0.29 ( 0.21)	0.01 ( 0.03)	-0.32** ( 0.12)	-0.05 ( 0.04)	-0.11*** ( 0.03)	0.11* ( 0.06)
Summer Mean	8.06	0.88	2.46	1.02	5.73	0.10	2.95	0.97	0.25	1.40
Observations	6,338	6,338	6,338	6,338	6,338	6,338	6,338	6,338	6,338	6,338

Notes: Time is reported in hours. This table considers weekdays only and is for women age 25-55 with at least one child age 6-17 in the household who were employed as of the last CPS interview. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start in Panel A, this takes value 1 for weeks after the start of school; for summer start in Panel B, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together in Panel C. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded, as are days more than 9 weeks away from the week of the school start or summer start. "Y Mean" corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.

Table W11: Women, 25-55, at least one child 6-17 in HH, Under \$50,000 HH Income

<b>Panel A: School Start</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.01 (0.29)	-0.23* (0.13)	-0.07 (0.34)	0.49* (0.27)	-0.40 (0.58)	0.28* (0.15)	-0.32 (0.39)	-0.01 (0.09)	-0.05 (0.06)	0.14 (0.15)
Summer Mean	8.75	0.82	3.19	1.46	3.55	0.19	3.56	0.91	0.16	1.18
Observations	977	977	977	977	977	977	977	977	977	977

<b>Panel B: Summer Start</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.59* (0.31)	-0.02 (0.12)	-0.20 (0.34)	0.30 (0.27)	1.24** (0.55)	-0.02 (0.13)	-0.84** (0.41)	-0.05 (0.09)	0.07 (0.10)	0.20 (0.15)
Summer Mean	8.79	0.82	3.18	1.41	3.46	0.22	3.61	0.93	0.17	1.15
Observations	1,044	1,044	1,044	1,044	1,044	1,044	1,044	1,044	1,044	1,044

<b>Panel C: Stacked</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.32 (0.21)	-0.11 (0.09)	-0.20 (0.23)	0.39** (0.19)	0.53 (0.39)	0.12 (0.10)	-0.60** (0.27)	-0.04 (0.06)	0.03 (0.06)	0.15 (0.10)
Summer Mean	8.77	0.82	3.19	1.44	3.50	0.20	3.58	0.92	0.17	1.16
Observations	2,021	2,021	2,021	2,021	2,021	2,021	2,021	2,021	2,021	2,021

Notes: Time is reported in hours. This table considers weekdays only and is for women age 25-55 with at least one child age 6-17 in the household who were in a household with under \$50k household earnings. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start in Panel A, this takes value 1 for weeks after the start of school; for summer start in Panel B, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together in Panel C. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded, as are days more than 9 weeks away from the week of the school start or summer start. "Y Mean" corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.

Table W12: Women, 25-55, at least one child 6-17 in HH, At Least \$50,000 HH Income

<b>Panel A: School Start</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.35*	0.01	0.42	0.75***	-0.16	-0.04	-0.33	-0.07	-0.13	-0.05
	(0.21)	(0.09)	(0.30)	(0.20)	(0.52)	(0.08)	(0.27)	(0.09)	(0.09)	(0.14)
Summer Mean	8.21	0.81	2.81	1.32	4.45	0.08	3.07	1.06	0.38	1.53
Observations	1,267	1,267	1,267	1,267	1,267	1,267	1,267	1,267	1,267	1,267

<b>Panel B: Summer Start</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.51**	0.06	0.08	0.45**	0.41	0.13	-0.59**	-0.12	-0.20**	0.15
	(0.22)	(0.10)	(0.29)	(0.21)	(0.53)	(0.10)	(0.27)	(0.09)	(0.09)	(0.14)
Summer Mean	8.17	0.81	2.80	1.27	4.58	0.08	3.09	1.06	0.37	1.51
Observations	1,310	1,310	1,310	1,310	1,310	1,310	1,310	1,310	1,310	1,310

<b>Panel C: Stacked</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.44***	0.03	0.23	0.63***	0.10	0.03	-0.45**	-0.10*	-0.17**	0.08
	(0.14)	(0.07)	(0.21)	(0.14)	(0.36)	(0.06)	(0.19)	(0.06)	(0.07)	(0.10)
Summer Mean	8.19	0.81	2.80	1.30	4.52	0.08	3.08	1.06	0.38	1.52
Observations	2,577	2,577	2,577	2,577	2,577	2,577	2,577	2,577	2,577	2,577

Notes: Time is reported in hours. This table considers weekdays only and is for women age 25-55 with at least one child age 6-17 in the household who were in a household with at least \$50k household earnings. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start in Panel A, this takes value 1 for weeks after the start of school; for summer start in Panel B, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together in Panel C. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded, as are days more than 9 weeks away from the week of the school start or summer start. "Y Mean" corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.

Table W13: Time with Children, Weekdays, by Presence of 0-5 Year Old

<b>Panel A: Women with At Least One Child Age 6-17 and No Child 0-5</b>						
	In Presence of Kids	Secondary Childcare	Total Kids Activities	Help Kids Ed	Drive Kids	Other Activities w/ Kids
School	-0.80*** ( 0.18)	-1.51*** ( 0.22)	0.52*** ( 0.07)	0.23*** ( 0.03)	0.04*** ( 0.01)	0.25*** ( 0.06)
Summer Mean	4.83	4.40	0.79	0.04	0.06	0.69
Observations	6,673	5,953	6,673	6,673	6,673	6,673

<b>Panel A: Women with At Least One Child Age 6-17 and At Least One Child 0-5</b>						
	In Presence of Kids	Secondary Childcare	Total Kids Activities	Help Kids Ed	Drive Kids	Other Activities w/ Kids
School	0.07 ( 0.34)	-0.94** ( 0.35)	0.84*** ( 0.17)	0.29*** ( 0.04)	0.09*** ( 0.02)	0.46*** ( 0.16)
Summer Mean	7.66	7.21	2.20	0.05	0.09	2.05
Observations	2,669	2,422	2,669	2,669	2,669	2,669

<b>Panel C: Men with At Least One Child Age 6-17 and No Child 0-5</b>						
	In Presence of Kids	Secondary Childcare	Total Kids Activities	Help Kids Ed	Drive Kids	Other Activities w/ Kids
School	-0.72*** ( 0.18)	-0.94*** ( 0.21)	0.14** ( 0.06)	0.11*** ( 0.02)	0.02*** ( 0.01)	0.00 ( 0.06)
Summer Mean	3.07	2.73	0.46	0.02	0.03	0.42
Observations	4,818	4,309	4,818	4,818	4,818	4,818

<b>Panel D: Men with At Least One Child Age 6-17 and At Least One Child 0-5</b>						
	In Presence of Kids	Secondary Childcare	Total Kids Activities	Help Kids Ed	Drive Kids	Other Activities w/ Kids
School	-0.66** ( 0.33)	-1.23*** ( 0.37)	0.24* ( 0.14)	0.08*** ( 0.02)	0.03*** ( 0.01)	0.13 ( 0.13)
Summer Mean	4.23	4.12	0.99	0.02	0.03	0.94
Observations	2,033	1,828	2,033	2,033	2,033	2,033

*Notes:* Time is reported in hours. This table considers weekdays only. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start, this takes value 1 for weeks after the start of school; for summer start, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together. Panel A (C) is for women (men) age 25-55 with at least one child age 6-17 in the household and no child age 0-5. Panel B (D) is for women (men) age 25-55 with at least one child age 6-17 in the household and at least one child age 0-5. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded, as are days more than 9 weeks away from the week of the school start or summer start. "Y Mean" corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.

Table W14: Difference-in-RDD

	Panel A: Stacked									
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
SchoolXBaseline	-0.28*** (0.06)	-0.02 (0.03)	-0.06 (0.07)	0.41*** (0.05)	0.22* (0.13)	-0.01 (0.03)	-0.22** (0.08)	-0.06** (0.02)	-0.05** (0.02)	0.07** (0.04)
Summer Mean	8.36	0.87	2.69	1.02	4.59	0.14	3.61	0.99	0.26	1.29
Observations	17,301	17,301	17,301	17,301	17,301	17,301	17,301	17,301	17,301	17,301

*Notes:* Time is reported in hours. This table considers weekdays only. It reports the results of difference-in-discontinuity regressions of an outcome on an indicator for being above the cutoff (for school start, this takes value 1 for weeks after the start of school; for summer start, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. Finally, it includes “Baseline,” which is 1 for women age 25-55 with at least one child age 6-17 in the household and is 0 for women age 25-55 with no children age 3-18 in the household. Finally, it includes an interaction for being over the cutoff and baseline, which is the coefficient that we report. The school start and summer start periods are stacked together. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded, as are days more than 9 weeks away from the week of the school start or summer start. “Y Mean” corresponds to the mean during the summer. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.

Table W15: Time with Children, Full Week

<b>Panel A: Women with At Least One Child Age 6-17</b>						
	In Presence of Kids	Secondary Childcare	Total Kids Activities	Help Kids Ed	Drive Kids	Other Activities w/ Kids
School	-0.34** ( 0.13)	-0.84*** ( 0.15)	0.49*** ( 0.06)	0.19*** ( 0.02)	0.04*** ( 0.01)	0.26*** ( 0.05)
Summer Mean	6.56	6.11	1.09	0.02	0.04	1.02
Observations	19,164	17,163	19,164	19,164	19,164	19,164

<b>Panel B: Men with At Least One Child Age 6-17</b>						
	In Presence of Kids	Secondary Childcare	Total Kids Activities	Help Kids Ed	Drive Kids	Other Activities w/ Kids
School	-0.42*** ( 0.13)	-0.70*** ( 0.16)	0.20*** ( 0.05)	0.09*** ( 0.01)	0.02*** ( 0.00)	0.09** ( 0.05)
Summer Mean	5.07	4.71	0.65	0.01	0.02	0.62
Observations	13,787	12,355	13,787	13,787	13,787	13,787

*Notes:* Time is reported in hours. This table considers the full week. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start, this takes value 1 for weeks after the start of school; for summer start, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together. Panel A (B) is for women (men) age 25-55 with at least one child age 6-17 in the household. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded, as are days more than 9 weeks away from the week of the school start or summer start. "Y Mean" corresponds to the mean during the summer. We weight weekday observations by 5 and weekend observations by 2 to address oversampling of weekends. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.



Table W16: Baseline: Full Week

<b>Panel A: Women with At Least One Child Age 6-17</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.27*** (0.06)	-0.02 (0.03)	0.11 (0.09)	0.49*** (0.06)	0.06 (0.13)	0.05* (0.03)	-0.26*** (0.09)	-0.06** (0.02)	-0.10*** (0.02)	0.01 (0.04)
Summer Mean	8.79	0.80	3.34	1.21	2.57	0.10	4.22	1.08	0.34	1.34
Observations	19,164	19,164	19,164	19,164	19,164	19,164	19,164	19,164	19,164	19,164
<b>Panel B: Women with No Children Age 3-18</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.11 (0.08)	-0.01 (0.04)	0.04 (0.09)	0.11 (0.06)	-0.02 (0.15)	-0.00 (0.04)	0.02 (0.11)	0.00 (0.03)	-0.04* (0.02)	0.03 (0.05)
Summer Mean	8.87	0.91	2.71	0.67	3.21	0.12	4.73	1.07	0.30	1.28
Observations	16,075	16,075	16,075	16,075	16,075	16,075	16,075	16,075	16,075	16,075
<b>Panel C: Men with At Least One Child Age 6-17</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.13* (0.07)	-0.03 (0.03)	-0.02 (0.08)	0.18*** (0.05)	0.40** (0.16)	-0.00 (0.03)	-0.25** (0.10)	-0.02 (0.03)	-0.12*** (0.04)	-0.01 (0.06)
Summer Mean	8.34	0.61	2.15	0.77	4.44	0.05	4.23	1.19	0.55	1.51
Observations	13,787	13,787	13,787	13,787	13,787	13,787	13,787	13,787	13,787	13,787
<b>Panel D: Children Age 15-17</b>										
	Sleep	Self Care	Household	Caring	Work	Ed	Free Time	Eating	Exercise	Travel
School	-0.89*** (0.14)	0.13*** (0.04)	-0.50*** (0.09)	-0.09** (0.04)	-0.60*** (0.14)	4.04*** (0.18)	-1.49*** (0.20)	-0.06 (0.04)	-0.41*** (0.10)	-0.06 (0.07)
Summer Mean	10.29	0.72	1.24	0.24	1.21	0.44	6.29	0.95	1.16	1.26
Observations	5,568	5,568	5,568	5,568	5,568	5,568	5,568	5,568	5,568	5,568

Notes: Time is reported in hours. This table considers the full week. It reports the results of regressions of an outcome on an indicator for being above the cutoff (for school start, this takes value 1 for weeks after the start of school; for summer start, it is reversed and takes value 1 for weeks before the start of summer), and a linear function of the running variable, days away from the Wednesday of the school start (or summer start). The regression also includes a number of controls. The school start and summer start periods are stacked together. Panel A (C) is for women (men) age 25-55 with at least one child age 6-17 in the household, Panel B is for women age 25-55 with no children age 3-18 in the household, and Panel D is for children age 15-17. Each coefficient corresponds to a different regression. The week of school start and summer start is excluded, as are days more than 9 weeks away from the week of the school start or summer start. "Y Mean" corresponds to the mean during the summer. We weight weekday observations by 5 and weekend observations by 2 to address oversampling of weekends. Standard error are clustered at the level at which the school start or summer start date was calculated. \*\*\* 0.01; \*\* 0.05; \* 0.1.