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of Parental Child Care:**  
Evidence from the  
American Time Use Survey

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# **The Temporal Demands of Parental Child Care: Evidence from the American Time Use Survey**

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## **Abstract**

Most research on parental time devoted to child care is based on survey questions regarding explicit care activities or co-presence of parents and children in the same room, factors clearly relevant to child development. Time spent keeping an eye and/or ear on young children while engaging in other activities deserves attention for a different reason—it represents an even larger constraint on maternal employment. Analysis of pooled time-diary data from the American Time Use Survey (ATUS) from 2004-2019 focuses on an underutilized question that asks respondents when own household children under the age of 13 were “in their care,” and shows that reported parental time likely devoted to supervision exceeds time devoted to active care by a factor of 2.9 and is more negatively related to maternal hours in paid employment. In-your-care time is an important indicator of the opportunity costs of motherhood, especially in low-income households unable to purchase or otherwise unable to obtain “babysitting” assistance.

Keywords:

child care, time use, maternal employment, gender

# The Temporal Demands of Parental Child Care: Evidence from the American Time Use Survey

## 1. Introduction

In her classic treatise on the *Economics of Household Production*, published in 1934, Margaret Reid emphasized the diffuse character of maternal responsibility: “Even though she may not be on active duty, evidence of her labor is about her. She is continually on call. Much so-called leisure has a ‘string attached’” (1934:319). Almost 90 years later, the complexity of family child care provision is still reflected in nuances of survey terminology. Even within the relatively narrow field time-use diary research, child care is often broken down into three different categories: Active child care typically involves interaction with children. Social time with children is defined by co-presence of a parent and child. Supervisory care (sometimes termed secondary, passive, or on-call care) reflects responsibilities rather than activities or co-presence; it requires both vigilance and readiness to provide active care if needed for a child who may or may not be in the same room of the home. (Budig & Folbre, 2004; Folbre et al., 2005; Kendig & Bianchi, 2008; Milkie et al., 2004).

Considerable research explores the impact of different types of care on child outcomes (Fomby & Musick, 2018; Hisen & Felfe, 2014; Kalenkoski & Foster, 2008;). However, their impact on the time constraints and concomitant costs of parenthood remains underexplored, though it has long been suspected that supervisory responsibilities limit opportunities for maternal employment (Bianchi et al., 2005:251; Craig, 2007). Parents often pay babysitters to “hold the fort” so that they get out of house for at least some evenings; purchased or donated child care services almost certainly reduce parents’ supervisory responsibilities more than active care, simply because such responsibilities cover a larger span of time.

The American Time Use Survey (ATUS) asks parents living with a child younger than 13 when such a child was “in your care” during the previous 24 hours (not including time that the reporting adult and/or all children were asleep). Responses to this question provide a useful, though imperfect, proxy for supervisory responsibilities. Economists have not always acknowledged this category of child care (see, for instance, Guryan et al. 2008). However, many sociologists argue that it should be seen as part of the “parenting package” (Fomby & Musick, 2018; Milkie and Wray, 2023). Empirical research on maternal time use in other countries also emphasizes this point (Craig 2007a, 2007b; Craig and Bittman 2007; Craig et al. 2014).

We make a more specific argument: supervisory responsibilities represent a more significant constraint on maternal participation in paid employment in the U.S. than active care. Our review of previous research on the measurement of parental time use in the U.S. sets the stage for a detailed analysis of pooled data from the 2004-2019 American Time Use Survey (ATUS). Descriptive results and multivariate analysis show that supervisory care cannot be equated with time with children, that the relative provision of active care and supervisory care varies considerably by the characteristics of parents and children, and that supervisory care has a much stronger negative relationship with hours of maternal employment on the diary day than does active care. These results challenge the conventional practice of defining the temporal demands of parenthood in terms of active care alone.

## **2. Background**

Most time diary-based surveys ask respondents, “what were you *doing?*” at specific times during the preceding day. Parenting time in the U.S. is typically defined in terms of time spent in activities that “explicitly focus on the child while the child is present”—physical care such as feeding, bathing, and developmental interactions (Prickett & Augustine, 2021:7). This category

of child care is particularly relevant to analysis of the effects of intensive parenting on child outcomes. However, the need to provide supervision (and to be available if active care is required) represents a larger constraint on parental time use.

While only 14 states in the U.S. have established specific laws or guidelines regarding the minimum age at which a child may be left at home alone, surveys indicate that most social workers, as well as the public, agree that children under the age of 13 should not be left alone for any significant period of time (Jennissen et al., 2018). Parents found violating this standard are liable to charges of child neglect, which can result in loss of parental custody. For instance, in early 2021, an Illinois teacher notified authorities that a 7-year-old boy she was teaching online had been left alone by his mother (along with a 3-year-old brother) for several hours resulting from the mother's employment-related travel. Although the children came to no harm, they were remanded to protective custody (Fabbre, 2021).

In 2020, pandemic-related child care center and school closures contributed to significant declines in maternal labor force participation (Heggeness, 2020). Yet average levels of active maternal child care were lower in 2020 than in comparable months of 2019 or 2017-18, partly because of a reduction in time transporting children to and from activities outside the home. By contrast, mothers reported a significant increase in average time that children were "in their care" (BLS, 2021). More attention to this aspect of parental time use clearly has important policy implications.

### **3. Supervisory Constraints**

While family responsibility for young children spans every minute of the 24-hour day, not all such responsibility imposes costly temporal constraints. Most adults sleep at home whether or not they are responsible for a young child, and many young children sleep through

much of the night. However, the need to supervise young children during much of the day limits participation in paid employment and often channels mothers into poorly paid jobs and hinders their opportunities for advancement. Very young children are particularly needy, but even those between the ages of 6 and 12 typically leave school well before 4PM, an hour or more before the typical paid workday ends.

Survey respondents asked to describe what they were doing are not likely to report activities that take place in the background or are easily combined with more salient activities. Over the 2004-2019 period, very few parents living with own children under 13 reported in the ATUS that they were “looking after children” as primary activity and this activity averaged only about 6 minutes a day; similarly, reports of “talking and listening to children” were implausibly low, at less than 3 minutes per day (authors’ calculations).

Even in surveys that collect data on secondary activities, questions such as “what else were you *doing* at the same time?” prime respondents to recall specific activities, not background responsibilities. The distinction between primary and secondary activities is typically based on the amount of attention required. Time-diary surveys that ask respondents to list secondary activities commonly elicit responses such as “listening to the radio” or “watching television” or no responses at all, and seldom capture supervisory care for children unless they include a specific prompt (Folbre and Yoon, 2007; UN Women, 2021). That the ATUS includes such a specific prompt is a valuable feature of its survey design.

Primary activities do not necessarily dominate decisions about how to allocate time, because of opportunities for joint production. A mother who is unable to participate in paid employment because of supervisory responsibilities probably devotes more time to housework because she is confined to the home even if her child is watching television or napping. Parental

responsibility for supervision reduces the opportunity costs of domestic tasks that are compatible with background oversight. If someone must stay home regardless, they might as well do the laundry, prepare meals, and wash dishes.

Supervisory constraints for young children vary by household characteristics. Some dual-earner couples adopt shift work or asynchronous schedules. The growing number of jobs with unpredictable work hours has made it more difficult for parents to schedule out-of-home child care and low-income mothers are less likely to take advantage of center-based child care in part because they are typically employed for irregular hours (Harknett et al., 2022, Pilarz et al., 2019). The greater need for non-parental child care driven by nonstandard work schedules is largely concentrated among minority and immigrant low-wage workers and single mothers (Lambert, 2020).

While active child care also constrains participation in paid employment, the overall number of hours devoted to it is relatively low. For many years, mothers in the U.S. have averaged less than two hours a day and fathers less than one hour a day on primary child care activities (Bianchi, 2000; Bianchi et al., 2006; Folbre, 2008; Gupta et al., 2021; Robinson & Godbey, 1997). Analysis of pooled ATUS data from 2003-2004 found that only 86% of mothers of household children under 13 (and 62% of fathers) reported active child care on the diary day, compared to 98% of mothers (and 93% of fathers) reporting children “in their care.” Over this period mothers averaged 2.4 hours and fathers 1.2 hours of active care compared to 6.8 hours and 4.6 hours, respectively, of children “in their care” (Stewart and Allard, 2016:149). Our analysis updates and further explores this comparison.

Types of child care vary with both the age and number of children. Mothers’ time devoted to physical child care is high when children are very young (0-2) and shifts to

developmental activities as children become toddlers (Bianchi et al., 2006; Folbre & Yoon, 2007). As children age, supervisory time does not decline as steeply as active child care, although it enjoys greater economies of scale (it takes less time to supervise three children under the age of 13 than to provide active care for each of them). Sequence, timing, and substitutability also matter. Some types of active child care—such as feeding children—cannot be postponed. However, developmental activities such as reading out loud can be scheduled at times that do not interfere with standard employment (Craig, 2006).

Historical data on time use in the U.S. suggest that time devoted to active child care has increased since the 1960s even as mothers' hours of paid employment have gone up (Bianchi et al. 2006). Employed mothers in the U.S. tend to spend less time on leisure time, housework, and sleep than their counterparts outside employment, compensating for a decline in time with children by increasing interaction with them (Sayer et al., 2004). However, little is known about trends in supervisory time, largely unmeasured before 2003 (Bianchi et al., 2005). Measures of “time with” children in the pre-2003 American Heritage Time Use Surveys are inconsistent and unreliable.

The elasticity of time devoted to active child care with respect to hours of maternal employment is surprisingly low, though estimates vary according to methods and model specifications. One early analysis applying Ordinary Least Squares (OLS) regression found that an additional hour of paid work for a mother resulted in only a three-minute decrease in active child care per day (Zick & Bryant, 1996). Bianchi (2000) notes that although non-employed mothers spend about twice as much time at home as employed mothers, most of the additional time is spent cooking and doing housework rather than in active child care. In their analysis of data from the ATUS 2003-2018, Gupta et al. (2021) report results from an OLS regression



showing that an additional hour of employment on a weekday was associated with a less than two-minute reduction in (active) maternal child care.

Reinforcing earlier findings, Kimmel and Connelly (2007) argue that hours of maternal employment reduce minutes of active child care far less than minutes of housework because mothers place a higher priority on the former. However, their analysis explicitly excludes time reported when children are reported “in your care” and time with parents and children are present in the same room (during housework, as well as leisure time), ignoring the ways that mothers accommodate employment by reducing both supervisory care and social time with children (Kimmel & Connelly, 2007:672). This effect is consistent with hypothesized tradeoffs between “quantity” and “quality” of parental child care (Hsin & Felfe, 2014).

#### *Definitions and Measurement of Supervisory Time*

Differences in time-use survey design illustrate the value of looking beyond the active child care that parents provide. The Australian Time Use Surveys of 1992, 1997, and 2006 were explicitly designed to capture passive care as a secondary activity, with specific prompts encouraging respondents to report it. Analysis of this data has consistently shown much higher levels of parental child care time than any other nationally representative survey (Folbre, 2022). Use of stylized questions such as “How much time did you spend engaging in child care the previous week?” typically yields much higher estimates than time diaries based on reporting of activities during discrete time periods the previous day.

This discrepancy has often been attributed to imperfect recall and/or social desirability bias. However, it may also reflect a broader interpretation of the word “child care” (Budig and Folbre, 2004). In 2017, the U.S. Panel Study of Income Dynamics (PSID) added a stylized question asking respondents how much time they spent in the last week “caring for and looking

after children.” While most reports of time allocation to unpaid work in the PSID are consistent with calculations based on the ATUS, the child care estimates are much higher, *unless* in-your-care time is added to active care time. When this addition is made, estimates of maternal time use in both surveys are closely aligned (Insolera et al., 2019).

Parent/child co-presence is another important dimension of parental engagement because it affords opportunities for attachment, socialization, and learning as well as supervision. The ratio of active care to parent/child co-presence time in the U.S. varies significantly by gender, race/ethnicity, and class (Milkie & Wray, 2023; Suh, 2014). Research shows that it varies with time spent in employment (Hsin and Felfe, 2014; Wray et al., 2021). However, estimates of co-presence are sensitive to spatial definitions. Unlike time-use surveys conducted in some other countries, the ATUS defines co-presence as “in the same room” (Mullan and Craig, 2009).

As a result, young children napping or watching television elsewhere in the home or playing in the backyard are not reported as co-present. The ATUS in-your-care question, by contrast, imposes no spatial criterion. It is asked of adults co-residing with a child under the age of 13 after the regular time diary is administered yet also tied to specific primary activities and time slots. Respondents are asked if, at any time during these activities, a child was “in your care.” Time in which the respondent and/or all household children are asleep is excluded from tabulation. The U.S. Bureau of Labor Statistics reports the results as “secondary child care.”

The in-your-care question was extensively field-tested and holds up well to empirical assessment (Stewart & Allard, 2016). Yet few researchers have devoted close attention to it, perhaps because of concerns about its interpretation or lack of comparability with earlier time-use surveys. It clearly performs a different “function” than active child care (Gupta et al., 2021). This function, however, remains crucial to children’s health and safety. A closer look at the

relationship between in-your-care time, parent-child co-presence, active child care, and employment outside the home elucidates the temporal constraints imposed by parenthood in general and motherhood in particular.

#### **4. Data and Variables**

The American Time Use Survey (ATUS) is an ongoing nationally representative survey that has been conducted monthly by the U.S. Census Bureau for the U.S. Bureau of Labor Statistics since January 2003 (see <https://www.bls.gov/tus/>). Respondents are randomly selected individuals from households that have completed their participation in the Current Population Survey (CPS), representative of the U.S. civilian non-institutional population ages 15 and over. They are asked to list demographic characteristics of household members such as gender, age, and relationships to the respondent, and labor force information for the respondent and their household members including spouse/cohabiting partner.

ATUS respondents are asked to sequentially report their primary activities during the 24-hour period from 4:00 AM the day before the interview to 4:00 AM of the day of the interview. For each reported activity, the interviewer asks how long the activity lasted, who was in the room or accompanied the respondent during the activity, and where the activity took place. In the analysis here, observations with allocated data or with inconsistent demographic information between the CPS and ATUS surveys are deleted. ATUS final survey weights are applied, reweighted separately for subgroups (mothers and fathers) and for day-of-week representation.

This analysis uses pooled data from the ATUS for the years 2004-2019. Data from 2003 are excluded because in that year the in-your-care question did not distinguish between household and non-household children. While the pooled data covers a long time period, an analysis of annual data (not shown here) shows little variation and no significant trend over time

in average parental time devoted to components of the “parenting package.” The universe is limited to mothers and fathers (ages 18 and over) living with at least one own household child under the age of 13 and no non-own children or older children (own children include adopted and stepchildren). The first restriction resolves the difficulty of distinguishing parental contributions from those of other household residents but excludes many biological fathers because they are less likely to co-reside with own children than mothers are. Households with children 13 or over are excluded because these children are recipients of active care but are not included in measures of supervisory care.

The pooled data set provides an ample sample size of 17,134 fathers and 24,753 mothers (fathers represent only 41% of parents in this universe). The ATUS asks respondents living in a household with a child under the age of 13 “whether a child under the age of 13 was in your care” while they were engaged in other activities. The question covers only the period between when the first child under age 13 woke up and the last child under age 13 went to bed on a diary day and is restricted to time that the respondent was awake. It includes time that children were napping during the day. The ATUS distinguishes between own-household children and others, and asks if there was another person “in the same room” when the activity was being conducted (for additional details, see Appendix A). Multiple individuals, including adults and children, could be listed. There is considerable overlap between in-your-care time and co-presence of parents and children. To avoid double-counting, our tables include separate tabulations of parent-child co-presence time only when it does not overlap with in-your-care time.

Since the relationship between maternal employment and child care responsibilities is of particular interest, our multivariate analysis focuses on differences among mothers. The dependent variables are minutes devoted on a diary day to two different categories of child care,

defined in mutually exclusive terms—active care and in-your-care time. Active child care includes physical care, feeding children, helping and teaching, talking and reading, indoor and outdoor play, and medical care for children, managing phone calls for children, as well as travel related to child care and attending children’s sports or art events.

A key independent variable is reported minutes of paid employment on the diary day. Other independent variables that may affect active care and in-your-care differently include education, race/ethnicity, marital status, household composition and income, presence of another household adult other than a spouse, metropolitan residence, month of year, and weekend vs. weekday. All never married, divorced or separated, or widowed mothers are treated as single mothers. Cohabiting mothers and fathers are included in the married/cohabiting category. A coresident adult is defined as a person who is neither a child of the reference person nor the partner of a mother or father, such as a parent, sibling, other relative, or a non-kin person living in the same household.

## **5. Analytical Plan**

Actual supervisory constraints cannot be measured directly and are partially endogenous. Mothers of young children who are employed full-time are not representative of all mothers because, by definition, they have found a way around such constraints, either by assistance from kin or purchased/publicly provided child care. Mothers who are not employed may spend more time with children in their care due to preferences, rather than constraints. Since reported time use in activities, must by definition, add up to 24 hours in a day, individual time devoted to active child care and to employment are necessarily related. As noted earlier, however, tradeoffs between these two uses of time are slim. In-your-care time is not mathematically constrained in the same way—while it is bounded between 0 and waking hours, it can be combined with any

number of activities, including leisure and paid employment conducted at home. The analytical goal here is measurement of tradeoffs, not causal inference.

The descriptive analysis clarifies overlaps among different types of care and tabulates the frequency with which another parent was present when the other parent reported a child in their care, distinguished by the gender of the parent and the age group of the children (mothers and fathers living with children under age 5, but no older children, and those living with children ages 5-12, but none older or younger). The multivariate analysis explores additional variables relevant to maternal time allocation, including number and age of children, and highlights the relationship between active child care, in-your-care time, and hours of maternal employment on the diary day. Ordinary Least Squares regression makes it possible to compare the size and significance of coefficients on the same independent variables for two distinct dependent variables.

Our descriptive analysis tests three general hypotheses:

*Hypothesis 1:* Parental in-your-care time is quantitatively greater than active care time, extends beyond parental co-presence with children as measured by the ATUS, and varies distinctively by gender of parent and number and age of children.

*Hypothesis 2:* Mothers are more likely than fathers to provide both active child care and in-your-care time without another spouse present, an indicator of supervisory constraint.

*Hypothesis 3:* Maternal in-your-care time is more likely than paternal in-your-care time to overlap with unpaid housework activities in ways relevant to assessment of the replacement cost valuation of unpaid housework (many mothers are “babysitting” while doing housework).

We use multivariate analysis to compare tradeoffs between active care and minutes of paid work on the diary day, and to explore racial/ethnic differences in the relative importance of active and supervisory care. The two dependent variables are minutes of active child care and minutes of in-your-care time on the diary day; the independent variables of particular interest are minutes of paid work on diary day, and the effects of race/ethnicity. The control variables include age, age squared, marital status, dummy variables for Black, non-Hispanic, Hispanic, and Other, non-Hispanic relative to the reference category of White Non-Hispanic, three dummy variables for level of education, three dummy variables for household income, number of children in two age categories under 13, presence of an adult other than a spouse, dummy variable for weekend relative to weekend, and dummy variables for month of year (See Tables 5 and 6).

We focus this analysis on two specific hypotheses:

*Hypothesis 4:* Daily minutes of maternal employment are more strongly and negatively associated with maternal in-your-care time than with maternal active child care.

*Hypothesis 5:* Variables indicative of relative economic and social advantage and commitment to “intensive parenting,” (such White Non-Hispanic racial/ethnic identity, level of education, quartile of household income, and residence in a metropolitan area) are positively associated with active child care and negatively associated with in-your-care time.

## **6. Results**

Table 1 presents the characteristics of the sample used in this analysis, which includes parents 18 and over who reside with at least one own child under 13 years of age and no non-own children. A total of 41,887 parents included in the pooled sample, with an average age of 36.1, co-residing with an average of 1.81 own children under 13. About 69% are White non-Hispanic, 8% Black non-Hispanic, and 15% Hispanic. About 44% have a college degree or higher. Not surprisingly, mothers are more likely than fathers of coresident children to report being out of the labor force (27% compared to 4%), and if employed, their usual hours of weekly employment are lower, but still high (36.4 compared to 45.8 hours per week).

The temporal dimension of the “parenting package” is defined as the sum of active child care, in-your-care time that does not overlap with active child care, and co-presence that does not overlap with either active child care or in-your-care. The averages reported in Table 2, reported both separately and non-overlapping, show how overlaps are prioritized: active child care preempts other labels, and in-your-care time preempts co-presence. The results support Hypothesis 1, showing that active child care is small relative to in-your-care time, averaging 1.96 hours per day compared to 5.72 hours of in-your-care time (rows 1 and 2, column 1). In-your-care time overlaps imperfectly with co-presence: in-your-care time without co-presence averages 1.65 hours per day (row 4, column 1) and co-presence without in-your-care averages only .27 hours per day (row 5, column 1). Estimates of the size of the parenting package sum to an average of 6.28 hours per day per father and 9.31 per mother in households with any child under 13 (Row 6, Table 2)—far greater than their averages of active care—1.33 and 2.47, respectively (Row 1, Table 2).

Mothers devote more time in all three categories of parenting time and these differences are statistically significant. Note, however, that fathers report more time co-present with children



who are NOT in-their-care than mothers (Row 5, Columns 2 and 3). This small but statistically significant difference (an average of .36 hours for father relative to .21 hours for mothers) is consistent with normative pressure for mothers to take more responsibility for care than fathers and lends validity to the distinction between in-your-care time and co-presence. Still, it is also noteworthy that fathers' relative participation in supervisory care is far greater than their participation in active care. Their reported average in-your-care time is about 69% of that of mothers (4.60/6.63) while their reported active child care is about 54% that of mothers (1.33/2.47). This pattern is particularly apparent for those in households with older children, where the respective ratios are 75% of mothers' average in-your-care time compared to 58% of their active care time. These differences would be even greater if comparison were restricted to households with both mothers and fathers; single mothers get less assistance with child supervision (as in the Australian case documented by Craig, 2005).

Age of children clearly shapes the composition of care time. The average total non-overlapping time a parent devotes to children is higher for households that include only children 0-4, at 8.28 (row 6, column 4) compared to 7.03 hours per day in those that include only children 5-12 (row 6 column 7). Most of this difference is driven by declines in mothers' active care; in-your-time for older children declines slightly for mothers, from 6.63 to 6.12 (Row 2, columns 6 and 9) even as it increases slightly for fathers, from 4.31 to 4.62 (Row 2, columns 5 and 8). At first glance this seems puzzling, since older children spend more time out of home at school. On the other hand, they spend less time sleeping at night than younger children (not counting sleep interruptions caused by infants!). Perhaps because they are better able to feed and dress themselves parents substitute supervision for direct care. Also, older children tend to require more emotional attention and social interaction.

This overview provides descriptive support for Hypothesis 1 and justifies our emphasis on the first two categories of the parenting package, active care and in-your-care time. However, it raises the question of overlaps between paternal and maternal care. Most child care activities are performed by one parent at a time, even if another parent is present, but in principle, two parents could simultaneously consider a child in their care. Since the ATUS only samples one person per household, this possibility cannot be directly examined. However, attention to the “who with” variable makes it possible to determine how much time mothers report fathers present when they have children in-their-care, compared to the time that fathers report mothers present under the same circumstances. This comparison is relevant to supervisory constraints, since, in principle, only one parent (or other adult) need be available. However, children may well benefit from the simultaneous availability of multiple adults (Milkie and Wray, 2023).

As Table 3 shows, mothers are more likely to provide care—whether active or in-your-care—without a father present than vice versa. About 73.2% of the active child care they provided was solo, compared to 55.6% for fathers. The gender differences are lower for older than for younger children: 76.7% vs. 62.8% (a difference of 13.9), compared to 68.7% vs. 48.1% (a difference of 20.6). In-your-care time was less likely to be solo than active care, but here too mothers were more likely than fathers to provide solo care: 55.7% relative to 38.5%. Mothers were also more likely than fathers to be co-present with children without another adult present. While these descriptive results provide support for Hypothesis 2, they imply that a simple tally of in-your-care time may overstate supervisory constraints, since the time that mothers and fathers report in married or cohabiting households partially overlaps (though mothers probably provide the bulk of actual supervision).

Table 4 shows that in-your-care time often overlaps with leisure and unpaid housework activities in gendered ways. About 35.1% of in-your-care time overlaps with housework for mothers, and about 21.9% of in-your-care time overlaps with housework for fathers. Fathers are more likely to report in-your-care activities while engaging in leisure--47.3% vs. 34.4%, a statistically significant difference. These descriptive results are consistent with Hypothesis 3, suggesting that time devoted to housework often involves the additional responsibility of “babysitting,” which should be taken into effect when assigning it a replacement cost value, an approach applied in a recent imputation of the contribution of unpaid work to total household consumption (Zacharias et al., 2024).

The basic relationship between hours of employment outside the home on the diary day and in-your-care time is revealed in a comparison of two extremes: Mothers outside the paid labor force report on average 8.3 hours of in-your-care time while those employed 7 or more hours on the diary day report an average of 5.4 hours. The absolute difference in active care time for these mothers are smaller: 3.29 versus 1.93 hours, though this difference is higher in in percentage terms--about 41%, because the base is lower. A more accurate picture of the relationship between maternal employment and in-your-care time vs. active child care emerges from multivariate analysis and confirms Hypothesis 4--the tradeoff between employment time and in-your-care time is greater, not surprising given the larger overall quantity of in-your-care time.

Table 5 presents Ordinary Least Squares results for two dependent variables: maternal time devoted to active care and to in-your-care time on the diary day. While neither active care nor in-your-care time can exceed 24 hours in a day, in-your-care time can overlap with any activity other than active care, sleep, and personal care, and the two are complements in some

respects, and substitutes in others. The most salient result emerges from comparison of relationships between minutes of paid employment on the diary day and the two categories of child care, both of which are statistically significant. An additional minute of paid employment is associated with a much larger reduction of in-your-care time than active care, -.51 minutes (or a reduction of slightly more than half an hour) compared to -.164. In other words, an additional hour of employment is associated with a reduction of about 30.6 minutes of “in your care” time compared to a reduction of about 9.8 minutes in active care.

While age effects are small and not generally significant, being married is associated with a large and significant increase in in-your-care time of 43.5 minutes compared to a small insignificant negative effect on active care. This may be indicative of the greater time constraints facing single mothers in the U.S. as well as the more social character of in-your-care time provided by married mothers. Most coefficients on variables that are indicators of relative economic and social advantage (relevant to Hypothesis 5) indicate positive and significant relationships with active care, and negative and significant relationships with in-your-care time.

Affluence is clearly correlated with emphasis on more active care, probably related to ideals of intensive mothering and concerns with children’s cognitive skills. Levels of education are consistently related with higher levels of active care and lower levels of in-your-care time; the effects are greatest for mothers who have graduated from college or more: they spend about 26 minutes more per day in active child care than a mother with less than a high school degree and also about 22 minutes less in-your-care time. Having a household income in the top two quartiles is associated with a higher level of active care and a lower level of in-your-care time. Living in a metropolitan area—where women’s employment, earnings, and access to child care are all generally higher—shows a similar contrast. These results are consistent with a high

income elasticity of demand for active child care and greater financial ability to purchase supervisory care.

Controlling for household income, the effects of race and ethnicity are more ambiguous. Black, non-Hispanic mothers spend relatively less time in active care than White non-Hispanic mothers; (a slight reduction in in-your-care time for the former is not significant). Hispanic mothers report less active care and more in-your-care time. Coefficients for household composition have the expected signs and magnitudes. The number of children ages 0-4 is more positively related to both uses of maternal time than the number ages 5-12, but the younger category is associated with more active care, the older category with more in-your-care time. The presence of an additional adult (other than spouse) in the household is associated with small reductions in both active care and in-your-care, but in the latter case, is not statistically significant.

Interestingly, weekends are associated with a reduction of about 67 minutes a day in active care and an increase of over 100 minutes of in-your-care time. Similarly, summer months of school vacation (June, July, and August) and winter holidays (December) are associated with lower levels of daily active care and higher levels of in-your-care time. Gender gaps in the labor market tend to widen every summer (Price & Wasserman, 2023). As participation in child care and school activities goes down, parents spend less time readying and transporting children but more time keeping an eye on them.

## **7. Conclusion**

Hours devoted to active care are not an accurate indicator of the temporal requirements of parental care for young children, because they require supervision by an adult available to provide active care if needed. Our analysis of American Time Use Survey data over the period

2004-2019 shows that U.S. mothers living in a household with an own child under the age of 13 over the period 2004-2019 reported an average of 2.47 hours devoted to active care, but an average of 6.36 non-overlapping hours with such children “in their care,” for a total of about 8.81 hours per day of tending to children. Co-resident fathers also reported more time with children “in their care” than in active care and contributed a larger share of total parental time to fulfilling this responsibility than they contributed to active care.

The impact of supervisory constraints helps explain why trade-offs between maternal paid employment and child care are greater for in-your-care time than for active care. It also shows that several different dimensions of social and economic advantage, including education, race/ethnicity, metropolitan residence, and household income are associated with significant differences in the ratio of active child care to in-your-care time. Affluent parents are better able to purchase substitutes for supervisory care, including private household services and enrollment in child care centers, and this enables them to devote more time to direct care activities even when their hours of paid employment are high. Unfortunately, we know of no U.S. data sets that enable analysis of the relative impact of non-parental care services on parental “in your care” and “active” child care time.

Legal and normative pressures for parental supervision as well as active care of young children help explain both the slow growth in maternal labor force participation in recent decades and drops in such participation during the Covid pandemic (Heggeness, 2021; Price and Wesserman, 2023). Constraints on maternal employment remain significant for low income parents in particular, despite relatively low levels of time devoted to active child care, because they are less able to purchase substitutes for supervisory time and also have less access to opportunities to set their own employment schedules or engage in employment from home.

Several caveats are in order. The meaning of the phrase “in your care” is open to interpretation and could be rendered more specific (Damián-González et al., forthcoming). Maternal in-your-care time is an imperfect measure of supervisory constraints; whatever its contributions, it may not all be socially necessary, since another parent or household adult may also be on call elsewhere in the home. Mothers may have options for reducing supervisory responsibilities that they choose not to exercise, because they enjoy having children in their care.

On the other hand, both in-your-care and co-presence measures exclude both sleep time and personal care time from consideration, understating actual supervisory constraints. Surely these constraints are relevant to assessments of time poverty and estimates of the monetary value of unpaid work. We hope our research will spur further efforts to understand the complexity of parental child care provision.

More attention should be devoted to the ways in which survey respondents, as well as academic researchers, interpret the difference between active care and in-your-care time. Some activities coded as active care, such as transporting children to child care or school are not necessarily any more interactive than watching videos together in the same room. Some activities that are not coded as care, such as eating dinner together (whether at a home or restaurant) may involve considerable, if intermittent demands for parental discipline and oversight. The developmental value of informal social interaction and parental co-presence with children may be underestimated (Milkie and Wray, 2003).

The implications of combining supervisory care with other productive activities clearly require serious consideration. Is it efficient for parents to combine supervisory care with more active tasks, or does this combination increase stress and lower productivity? (Craig and Brown, 2016). The recent growth in paid work-from-home among many managers and professionals

who have increased opportunities to work remotely increases the urgency of this question. Its answer probably depends on the cost and availability of out-of-home child care services and--in their absence--the likelihood of being interrupted by young children's frequent demands for short episodes of active care (Powell and Craig, 2015). Here lies a new frontier in time-use research, which also invites qualitative explorations of how parents experience different types of temporal demands.

**Conflict of interest.** The authors have no relevant financial or non-financial interests to disclose.

**Data source and availability:** The U.S. Bureau of Labor Statistics, American Time Use Survey, 2003-2021, archived at <https://www.bls.gov/tus/data.htm>



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Table 1. *Average Characteristics of Parents*

(living in households with any own household child under 13 and no older or non-own household child, pooled data, ATUS 2004-2019).

	Any own household child under 13		
	All	Fathers	Mothers
N	41,887	17,134	24,753
Age	36.1	37.8	34.9
Single	17%	7%	25%
Age of youngest child	4.4	4.3	4.4
Number of children	1.8	1.8	1.8
<i>Race/Ethnicity</i>			
White (non-Hispanic)	69%	72%	67%
Black (non-Hispanic)	8%	6%	10%
Hispanic	15%	14%	16%
Other (non-Hispanic)	8%	8%	7%
<i>Education</i>			
Less than high school	8%	8%	8%
High school graduate	21%	22%	20%
Some college, no degree	27%	25%	29%
College graduate or more	44%	45%	43%
<i>Employment</i>			
Not in the labor force	18%	4%	27%
Usual hours per week if employed	41.0	45.8	36.4
Employed full-time	64%	87%	47%
Employed part-time	14%	5%	20%
Unemployed	5%	3%	6%
Median household income	\$62,363	\$78,310	\$58,002

Means are unweighted. Household income is adjusted by CPI-U, 2019=100



Table 2.

*Average Duration in Daily Hours, Types and Overlaps of Childcare Responsibility*

(parents living in households with any own household child under 13 and no older or non-own household child, pooled data, ATUS 2004-2019).

	Own household child under 13			Own household child 0-4, none >4			Own household child 5-12, none <5		
	All	Fathers	Mothers	All	Fathers	Mothers	All	Fathers	Mothers
<i>Subtotals</i>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. Active childcare	1.96	1.33	2.47***	2.38	1.62	3.01***	1.33	0.94	1.63***
2. In-your-care	5.72	4.60	6.63***	5.59	4.31	6.63***	5.46	4.62	6.12***
3. Co-presence	6.18	4.88	7.22***	6.71	5.17	7.96***	5.09	4.26	5.74***
<i>Subtotals less overlaps</i>									
4. In-your-care, no co-presence	1.65	1.30	1.92***	1.46	1.09	1.76***	1.78	1.50	1.99***
5. Co-presence, no active or in-your-care	0.27	0.36	0.21***	0.30	0.41	0.22***	0.24	0.30	0.19***
<i>Total non-overlapping</i>									
6. Active plus in-your-care plus co-presence of parent with child (1+2+5)	7.96	6.28	9.31***	8.28	6.34	9.86***	7.03	5.86	7.94***

Note: \* p<0.05, \*\* p<0.01, and \*\*\* p<0.001 indicate statistically significant difference between fathers and mothers.

Table 3.

*Percentages of “Solo” Parental Childcare and Co-Presence with Children* (no other adult present at the time, parents living in households with any own household child under 13 and no older or non-own household child, pooled data, ATUS 2004-2019).

	Own household children under 13	Own household children 0-4, none older	Own household children 5-12, none younger
	% solo	% solo	% solo
<i>Fathers</i>			
Active childcare	55.6	48.1	62.8
In-your-care	38.5	33.8	43.3
Co-presence with children, not overlapping active or in-your-care time	20.7	15.7	25.1
<i>Mothers</i>			
Active childcare	73.2***	68.7***	76.7***
In-your-care	55.7***	52.1***	56.5***
Co-presence with children, not overlapping active or in-your-care time	51.1***	50.2***	51.3***

Note: \* p<0.05, \*\* p<0.01, and \*\*\* p<0.001 indicate statistically significant difference between fathers and mothers.

Table 4.

*Percent of Parental In-Your-Care Time Overlaps with Leisure and Unpaid Housework Activities (ATUS 2004-2019)*

	Own household children under 13	Own household children 0-4, none older	Own household children 5-12, none younger
<i>Fathers</i>			
In-your-care time overlapping with unpaid housework	21.9	21.5	21.6
In-your-care time, overlapping with leisure	47.3	46.9	49.1
<i>Mothers</i>			
In-your-care time, overlapping with unpaid housework	35.1***	34.7***	33.0***
In-your-care time, overlapping with leisure	34.4***	34.3***	36.3***

Note: \* p<0.05, \*\* p<0.01, and \*\*\* p<0.001 indicate statistically significant difference between fathers and mothers.

Table 5.

*Ordinary Least Squares Regressions Comparing Variables Related to Minutes per Day in Active Childcare and In-Your-Care (mothers living with own household child under 13 and no older or non-own child, ATUS 2004-2019)*

Independent variables	Dependent variables	
	Minutes of active child care	Minutes of in-your-care time
Minutes of paid work on diary day	-0.164*** (0.004)	-0.51*** (0.007)
Age	3.562*** (0.691)	0.637 (1.215)
Age squared	-0.0507*** (0.009)	-0.00221 (0.016)
Married	-0.347 (1.927)	43.51*** (3.390)
<i>Race: (reference= White Non-Hispanic)</i>		
Black , non-Hispanic	-29.30*** (2.656)	-3.20 (4.673)
Hispanic	-20.91*** (2.292)	35.00*** (4.033)
Other, non-Hispanic	-0.647 (2.908)	10.87** (5.116)
<i>Education (reference=less than High School)</i>		
High school graduate	4.637 (3.235)	-5.568 (5.693)
Some college	6.451** (3.216)	-13.76** (5.658)
College and more	26.22*** (3.384)	-22.11*** (5.955)
<i>HH Income (reference=below 25% of median)</i>		
HH income 25-50% of median	2.097 (2.100)	5.203 (3.695)
HH income 50-75% of median	7.236*** (2.383)	-0.843 (4.194)
HH income 75-100% of median	11.26*** (2.824)	-18.33*** (4.969)
<i>Household level variables</i>		
Metropolitan residence	10.83*** (1.934)	-15.82*** (3.402)
Number of children 0-4	57.73*** (1.232)	14.69*** (2.168)
Number of children 5-12	4.86*** (0.974)	17.93*** (1.713)

Additional adult other than spouse	-6.966*** (2.477)	-6.111 (4.359)
<i>Time of week or year (reference=weekday or January)</i>		
Weekend	-67.02*** (1.628)	101.10*** (2.865)
February	-2.349 (3.473)	-4.618 (6.110)
March	1.272 (3.401)	-8.69 (5.985)
April	5.942* (3.452)	-8.208 (6.073)
May	9.098*** (3.486)	-2.40 (6.134)
June	-12.59*** (3.483)	19.31*** (6.128)
July	-14.50*** (3.457)	30.17*** (6.083)
August	-13.74*** (3.493)	28.50*** (6.146)
September	8.145** (3.516)	-9.091 (6.187)
October	3.779 (3.506)	-1.807 (6.169)
November	4.612 (3.519)	-4.948 (6.193)
December	-11.64*** (3.530)	14.07** (6.211)
Constant	70.79*** (12.99)	393.9*** (22.85)
Observations	24,753	24,753
R-squared	0.230	0.347

Standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## Appendix A. Methodological Details

### *Data and Coding*

We accessed the American Time Use Survey (ATUS) data via the U.S. Bureau of Labor Statistics website using the Multi-Year ATUS microdata files, using the respondent, roster, activity, CPS linkage and “who” files for 2003-2021. This data can also be accessed through IPUMs, the Integrated Public Use Microdata Series databases maintained at the University of Minnesota. Information on variable names and Stata code is available from the first author on request.

### *Reliability*

The best examination of the reliability of the “in your care” measure in the American Time Use Survey (labeled “secondary care”) in the official tabulations) is Stewart and Allard (2016). Questions regarding whether a child under the age of 13 was “in your care,” were not asked after each reported activity, but retrospectively at the end of the computer-assisted interview. Therefore, it is possible that a child was not “in your care” during the entire period in which the primary activity was reported. However, it seems unlikely that young children frequently flip in and out of being “in your care” during primary activities conducted within the home, and as Stewart and Allard (2016) point out, many parents report relatively long blocks of time in which children are in their care. Our reported results showing that in-your-care time exceeds co-presence with young children in the same room by, on average, only about thirty minutes a day, suggests that it is not being overestimated. Mullan and Craig (2009) argue persuasively that reported co-presence of a young child—when not limited to co-presence in the same room, as in the ATUS—is a reasonable proxy for passive care responsibilities, including supervision. Questions regarding co-presence, like those regarding time “in your care,” are not asked during time the respondent is sleeping or engaging in personal care, which suggests that both measures are underestimated.

As noted in the text, some “in your care” time involved the co-presence of another parent. It is impossible to precisely determine the distribution of this constraint. If two parents simultaneously reported “in-your-care time” (a contingency that cannot be assessed in the ATUS, which surveyed only one parent per household), we cannot ascertain who actually took responsibility or paid an opportunity cost in terms of hours of employment. We hope to explore this issue in further research. Meanwhile, we emphasize that mothers were far more likely than fathers to provide “solo” “in-your-care”

ATUS users should be attentive to the large number of “in your care” variables in the data set, some of which have been constructed by the ATUS to exclude overlaps with sleep and active care, and some of which have not.