

Trends in Mothers' Parenting Time by Education and Work From 2003 to 2017

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ABSTRACT Scholars have been increasingly concerned about the rise in “intensive mothering” and its implications for the well-being of children and women and for inequality more broadly. These concerns, however, reflect a key assumption: that socioeconomic disparities in mothers’ parenting time observed in earlier eras have continued to grow. Using the American Time Use Survey (ATUS) from 2003–2005 and 2015–2017 ($n = 13,755$), we test this assumption by examining whether maternal education gaps in active time spent with children have persisted across the 2000s. We pay particular attention to the continued socioeconomic bifurcation in women’s access to full-time stable work, assessing whether changes in the education-related time gap are due to changes in who works and how much. We find that the gap in active childcare time between mothers with a college degree and those without has closed dramatically. Although some of this narrowing was driven by declines in time among college-educated mothers, most was driven by increases among mothers with less education. These trends, however, are observed only among mothers who were not employed full-time. Blinder-Oaxaca decomposition analyses further reveal that although most of the increase in active care time among nonworking mothers with less education was attributable to behavioral change, 58% of the decline among nonworking, college-educated mothers was a result of sociodemographic compositional changes. These findings illuminate population-level trends in mothers’ active parenting time, provide insights into the driving factors, and help update theories, qualitative findings, and policy considerations related to mothers’ and children’s well-being.

KEYWORDS Motherhood • Parenting • Childcare • Time use • Work • Education

Introduction

During the 1980s and 1990s, scholars questioned whether the increase in mothers’ labor force participation would reduce their time devoted to caregiving and, in turn, harm children’s development (Belsky and Eggebeen 1991; Desai et al. 1989). More recently, however, concerns have emerged as to whether some mothers may be spending *too* much time caregiving (Milkie et al. 2015; Nelson 2010; Nomaguchi and Milkie 2020). Numerous studies have identified potentially harmful effects of a mother’s overinvolve-

ment, including reduced time for employment, resultant socioeconomic inequalities, and hampered psychosocial well-being of both the mother and child (Cui et al. 2019; Givertz and Segrin, 2014; LeMoyné and Buchanan 2011; Locke et al. 2012). This shift in research focus reflects the realization that despite modern mothers' greater time investment in paid work, they are devoting *more* time to caregiving, especially to child-centered, time-intensive activities—such as reading, teaching, or feeding—that promote children's healthy development (Gauthier et al. 2004; Sayer, Bianchi, and Robinson 2004; Sayer, Gauthier, and Furstenberg 2004). This trend was especially pronounced among mothers with higher levels of education (Altintas 2016; Ramey and Ramey 2009). Thus, scholars are now questioning whether trends in active childcare time are connected to issues around the gender wage gap and a woman's career advancement (Blair-Loy 2009; Stone 2007), inequalities in children's test scores (Reardon and Portilla 2016), and the “diverging destinies” of children (Kalil 2015; McLanahan 2004).

This study aims to address these questions by continuing the tradition of examining time devoted to child-centered parenting activities by mothers with varying education levels. We do so, however, with an eye to considering whether the widening of the education gap in mothers' active childcare time has reversed course. Informed by a consideration of several cultural, economic, and policy factors that have emerged or expanded in recent decades and differentially altered parenting behaviors based on socioeconomic status, we hypothesize that the upward trend in middle-class mothers' parenting time has leveled off and that there has been a convergence in the amount of time that mothers of different education levels spend in active parenting activities. Considering also the decreased access to full-time stable work experienced by women with a lower level of education (Kalleberg 2011), we hypothesize that education-related patterns we uncover are observed for women of certain work statuses (e.g., higher-educated women in full-time work; lower-educated mothers who are not employed).

To examine these questions, we draw on a representative sample of mothers who participated in the American Time Use Surveys (ATUS) across the 2003–2017 period and a combination of regression and Blinder-Oaxaca decomposition techniques. With two known exceptions (discussed shortly), prior studies on education-related trends in mothers' parenting time were based on data from the 1960s to 1990s (Bianchi 2000; Guryan et al. 2008; Sayer, Bianchi, and Robinson 2004). Such studies also did not tease out the importance of compositional change *vis-à-vis* shifting patterns in mothers' active parenting time or the moderating role of mothers' paid work. Our results thus provide fresh knowledge of socioeconomic status trends in mothers' active childcare time and insights into the factors that explain these recent trends and inform debates on the role of mothers' active care time in the diverging destinies of U.S. children (Kalil 2015) and women's continued struggles to gain parity with men in the workplace (Gerson 2011).

Background

Examining Mothers' Parenting Time

In her landmark book, Sharon Hays (1996) traced the emergence of a new model of mothering she called “the ideology of intensive mothering.” Informed by several methods, including textual analysis of child-rearing manuals and in-depth interviews, Hays

argued that intensive mothering represented a new standard of appropriate child-rearing that required women to constantly strive to promote their children's development. Hays characterized this parenting model as "child-centered, expert-guided, emotionally absorbing, labor intensive, and financially expensive" (p. 8). Childcare, under this model, was considered best performed by women.

Despite the lack of consensus about how to quantify Hays' concept of intensive mothering, studies using large-scale surveys have shed light on the rise of mothers' parenting time more generally. A central strand of this literature is the use of time diary data to explore trends in mothers' parenting time (Folbre and Bittman 2004). As several scholars documented, although paid work was taking up a greater share of mothers' overall time in recent decades, women were spending more of their unpaid time in the types of child-centered activities Hays described and less time in leisure, housework, and sleep (Bianchi 2000; Bryant and Zick 1996). In some instances, mothers also decreased their work hours to meet childcare demands (Bianchi 2011).

SES Trends in Parenting Time

Although higher- and lower-SES mothers have similarly strong commitments to the ideology of intensive mothering (Hays 1996; Ishizuka 2019), mothers with higher levels of education were increasing their time in parenting activities at much faster rates. For example, Altintas (2016) found that in 1965, the average 32-year-old mother with one child under age 5 spent 40 minutes per day in developmental childcare (e.g., reading, helping with homework, activities related to children's education), irrespective of her educational background. By the 2008–2013 period, this number had risen to 65 minutes for mothers with a high school diploma or less but had doubled for college-educated mothers to 80 minutes. Ramey and Ramey (2009) documented a similar pattern: between 1965 and 2008, mothers with less education increased their time in childcare (which combined developmental care with general care, such as physical care and supervision) by four hours per week, and college-educated mothers increased theirs by nine hours.

These behavioral differences may be explained by the growing advantages associated with education, including greater financial resources to spend on developmental materials (e.g., books) and experiences (e.g., trips to museums); better access to jobs that allow flexible scheduling, paid leave, and involvement in children's activities; more knowledge of recommended parenting practices and skills to access such information; and greater efficacy to negotiate help from partners to take on domestic tasks that compete with parenting, such as cleaning (Augustine 2014; Bodovski and Farkas 2008; Crosnoe and Huston 2007; Kingston et al. 2003; Mirowsky and Ross 2003; Prickett and Augustine 2016).

Socialization perspectives and economic theories on incentive structures posit that experiences in higher education and higher-status segments of the labor market combined with an awareness of growing inequality and trends in downward mobility reinforce a view of parenting in which parents must strive to prepare their children to compete in school and the workplace. As such, high-SES parents are incentivized to follow through on a highly involved parenting approach (Doepke and Zilibotto 2019; Reeves 2017). Blending these ideas, Lareau (2003) proposed the widely cited concept of "concerted cultivation," whereby middle-class parents deploy their material

resources, cognitive skills, and familiarity with formal institutions to promote their children's success in school and healthy social and physical development.

Worsening Inequality in Maternal Time Investments?

Scholars have raised concerns about the time gap in active childcare between high- and low-SES mothers. Active parenting time is shown to promote children's well-being (Kalil and Mayer 2016) and is considered a key family-level resource (McLanahan and Percheski 2008); consequently, SES-related differences in active childcare time are viewed as a principal mechanism of inequality among children (Kalil 2015; Waldfogel and Washbrook 2011). In regard to mothers, several scholars have also suggested that the higher prevalence in part-time work (compared with fathers), leaving the labor market, or opting for (or relegated to) lower-status positions is due to the incongruity between contemporary work schemas and family schemas that implore women to invest more time in their children (Blair-Loy 2009; Stone 2007). Moreover, scholars have questioned whether higher-SES mothers suffer a greater mental health burden as a result of the pressures to mother intensively (Henderson et al. 2016; Milkie et al. 2015) and the trade-offs it requires in terms of leisure, sleep, and other salutary activities (e.g., exercise) (Bianchi 2000). For example, the pressure and performance of intensive mothering beliefs are associated with lower self-efficacy and higher levels of stress and depression (Gundersen and Barrett 2017; Henderson et al. 2016; Rizzo et al. 2013).

Although such concerns were previously valid, they raise the question of whether the disproportionate rise in active parenting time among high-SES mothers persists today. To our knowledge, only two studies have used data from the 2000s period to examine this question: Dotti Sani and Treas (2016) used data up to 2012, and Altintas (2016) up to 2013. These studies, however, reached different conclusions about whether the education gap in mothers' active care time has widened or narrowed beyond the late 1990s, and they were hindered by several substantial limitations. First, both studies used harmonized data (linked data sets collected at different times among different samples) to examine trends across wide intervals of time. As such, the shape of the trend in active care time *within* the post-2000 period is unclear. Second, and perhaps more critically, these studies were limited to a small set of covariates. Thus, they could not account for key confounds, such as racial/ethnic background, age of children, income, and work—factors that may also reflect compositional changes in the characteristics of higher- versus lower-educated women that must be teased out when assessing behavioral change.

The Current Study: Maternal Active Childcare Time, 2003–2017

Given these limitations, as well as the salience of the discussions around work, family, and children's and women's well-being, we examined whether education-related trends in mothers' active childcare time have persisted into the 2000s. We expect the ramping up of middle-class mothers' active parenting time to have leveled off and educational disparities in this time to have converged. This latter hypothesis is based on the expectation that mothers with a lower education level have continued

to increase the amount of active childcare during this period. These expectations are based on several factors that are informed by the concept of the *web of time*, which highlights the interdependencies of families' schedules with broader societal factors that exert a push and pull on parents' time, as well as the ways that class and gender impact these temporal processes (Clawson and Gerstel 2014). They are specifically informed by a consideration of several trends that emerged or increased during the 2000s that may alter families' web of time.

The first trend is a cultural shift among higher status working women in their family schemas. Blair-Loy (2009:51) defined these schemas as the “partially internalized” “shared, public understandings” that women should be primarily responsible for caregiving and prioritize it above paid work. She found that working mothers in the youngest cohort, however, were redefining good mothering less in terms of the *performance* of time-intensive parenting activities and more in terms of the *delegation* and *outsourcing* of them—for example, by relying on nonparental childcare, extracurricular activities, and fathers to share in caregiving (Blair-Loy 2009; Stone and Lovejoy 2019). This reimagining of the family schema has also been observed in other studies (Christopher 2012; Johnson and Swanson 2006); is echoed in the popularity of books, such as Sheryl Sandberg's *Lean In: Women, Work, and the Will to Lead* (2013), which challenges women to rethink their conceptions of mothering and work; and is evidenced in data showing that higher-educated fathers have increased caregiving time more than lower-educated fathers (Atlantis 2016). The unequal rise in family income between mothers with a higher education level and those with a lower education level has also provided more financial means to realize this new family schema (Kalleberg 2011).

At the same time, less evidence exists to suggest that lower-educated mothers have altered their parenting approach (Atlantis 2016; Dotti Sani and Treas 2016). In fact, the last two decades have seen increased public investment in programs that directly or indirectly aim to *increase* disadvantaged mothers' active parenting time. These investments include school-based initiatives (U.S. Department of Education 2007); home visitation programs (Stolzfus and Lynch 2009); and programs administered through health care providers (such as Reach Out and Read, which tripled in scope since 2000 and has reached nearly 5 million children; Weitzman et al. 2004). Less-advantaged mothers have also gained greater access to structured childcare (Magnuson and Waldfogel 2016), which encourages more involved parenting behaviors (Crosnoe et al. 2012). Theories on cultural diffusion also suggest that more-advantaged groups galvanize cultural changes and that their adoption by less-advantaged groups tends to lag behind (Rogers 1995; Strang and Soule 1998).

Exploring the Role of Work

The salience of the aforementioned factors may depend on a critical element: mothers' labor force participation. Not only does labor force participation constrain women's time, but it does so in ways that vary distinctly by educational background (Clawson and Gerstel 2014). These differences have grown even more stratified in recent decades (Goldin and Katz 2010). Lower-educated mothers, in particular, have been increasingly confined to “bad jobs” that provide little autonomy and scheduling flexibility (Hepburn

2019); involve nonstandard schedules; and offer low pay or hours, requiring mothers to patch together multiple jobs (Jacobs and Gerson 2004). Such job arrangements interfere with the times when child-focused parenting activities often occur, such as reading before bed, and conflict with planned activities, such as taking children on outings or to extracurricular activities. Despite the diffusion of parenting norms or efficacy of public investment programs, we expect that less-educated mothers who were working full-time jobs are unlikely to have increased their active parenting time.

We also anticipate that any leveling off in active childcare time among higher-educated mothers will be primarily among mothers who work full-time. Although higher-educated mothers have experienced greater access to “good jobs” that offer greater autonomy, telecommuting opportunities, and flexibility in work schedules in ways that are more amenable to parenting, they are also contending with a work culture that demands more and more time investment (Parker and Wang 2013). It may be for this reason that full-time working women are the ones who are most forcefully challenging the dominant family schema (Blair-Loy 2009; Christopher 2012) and for whom messages around “leaning in” to the workplace have resonance (Collins 2019). This challenge to the family schema may not be as strong for women working part-time or not in the labor force, who may have already adapted their work schedules to accommodate the family schema (Stone 2007). Moreover, because higher-educated women typically earn higher wages, they also have more discretion as to how money is spent (Volger et al. 2008), meaning that they can pay for childcare or enroll children in activities to substitute their care.

Another reason we consider the role of mothers’ employment status is that access to full-time stable work for lower-educated women has decreased in recent decades but has been stable for higher-educated women (Kalleberg 2011; National Center for Education Statistics 2018). Compositional changes in access to full-time work may, therefore, also explain some of the increase in less-educated mothers’ active parenting time. We use decomposition techniques to explore this possibility as well as the significance of other changes in the sociodemographic composition of different education groups. As another example, if rates of single motherhood continued to rise among less-educated mothers but not higher-educated mothers during this period, increases in active childcare time may be partly driven by the fact that mothers with less education now have less support at home to share the parenting load.

Summary of Study

In short, this study has three aims. First, we examine whether the maternal education–related gap in active childcare time changed from 2003 to 2017. Second, we explore whether mothers’ employment moderates these trends. Third, we disaggregate the role of compositional shifts in both mothers’ labor force participation and other sociodemographic factors to tease out the extent to which these patterns can be attributable to *behavioral changes* or to *compositional* changes in access to full-time employment and other sociodemographic factors. Our results shed light on population-level trends in mothers’ parenting time in the United States and inform theories and debates on contemporary ideologies of motherhood, work-family conflict, and inequality in family life in the twenty-first century.

Methods

Data and Sample

The American Time Use Survey (ATUS) is a nationally representative time diary survey of U.S. residents ages 15 years and older, sponsored by the Bureau of Labor Statistics and conducted annually starting in 2003 by the U.S. Census Bureau. The sampling frame for ATUS is based on a randomly selected subset of households participating in the Current Population Survey (CPS). The CPS data provide sociodemographic information on respondents and their household members, and survey data collected two to five months later as part of ATUS provide information on key time-varying characteristics (e.g., employment status, household members) as well as time diary information. Time diary data were collected using structured questions and conversational interviewing techniques shown to produce accurate recall and capture a greater level of detail on activities. The result is a 24-hour diary listing the type of activity being conducted, start and end times of activities, whether a child and/or partner was present, and where the activity was conducted.

The study's analytical sample ($N=13,755$) is the subset of women who reported living with a child age 12 years or younger who was their own and who were interviewed between 2003 and 2005 ($n=8,748$) or between 2015 and 2017 ($n=5,007$).¹ We examine only mothers who participated in these surveys rather than mothers from all ATUS surveys (2003–2017), given that the decomposition analyses require distinct beginning and ending periods. This approach allows for a consistent sample across all modeling approaches (i.e., ordinary least squares [OLS] for Aims 1 and 2, and decompositions for Aim 3). We select three years for each period as the fewest number of years that would still yield around 100 respondents within each education \times work status \times period cell. Selecting more years yields substantively similar results. We also take steps to ensure the validity of our approach by testing the functional form (continuous and nonparametric) of the associations between year and time using data for all available years, comparing our results with those that produce the best fit (models with continuous specification). This analysis produces results that are substantively similar to those presented here. Figure A1 in the online appendix presents these comparisons, providing a sense of this functional form and particular years of interest, such as the Great Recession.

Measures

Dependent Variables

Our primary dependent variable is *active childcare time* measured in total minutes during a 24-hour period. This conceptualization of parenting represents the time that mothers spend in activities that explicitly focus on the child while the child is pres-

¹ The ATUS oversampled in the inaugural year of data collection, resulting in the larger subsample from the 2003–2005 surveys.

ent. Such activities include helping with homework, reading, arts and crafts, playing or doing sports with children, listening and talking, tending to physical needs (e.g., feeding, dressing), picking them up and dropping them off, attending extracurricular activities, providing medical care, and going on outings. Other parents or household members may or may not be present during these activities. Active childcare time does not include time when children are present but mothers are primarily engaged in another activity, such as cooking or doing housework, or when mothers indicate that childcare is a secondary activity. Nor does it include time that is generally not considered to be enriching for children or particularly demanding for mothers, such as shared television watching. The activities selected were intended to parallel the coding scheme used by Kalil and colleagues (2012), who also examined education-related disparities in maternal time with children. Although not all activities are considered developmentally rich (i.e., directly linked to children's cognitive development), they reflect time invested specifically on behalf of the child.

Despite this focus, we conduct auxiliary analyses with other conceptualizations of time with children (Table A1 in the online appendix provides a description based on the ATUS lexicon). These conceptualizations include developmentally rich time (activities most supportive of cognitive development and directly linked to it, such as reading to children); any time with children (i.e., regardless of activity, such as television watching or commuting); and active childcare time among mothers with young children (5 years and younger). These findings, discussed in more detail in the Discussion section, are consistent with the patterns found using our measure of active childcare time except for the measure of any time with children (see Table A2 in the online appendix).

Independent Variables

Maternal education is captured using four dummy variables representing mothers' highest level of education: less than high school, high school (diploma or GED), some college (including associate's degree), and college degree (four-year college degree or higher). Because sensitivity checks determined little statistical difference in active childcare time among those with an undergraduate degree and those with a graduate degree, we consider it appropriate to combine these groups within a single variable. *Period* is a binary variable indicating whether the respondent completed the time diary in 2015–2017 or 2003–2005. *Mothers' employment status* is measured as four dummy variables indicating whether the mother was working full-time (an average of 35 or more hours per week), part-time (less than 35 hours per week), was not in paid employment and not looking for work (hereafter, "not working"), or was unemployed and looking for work ("unemployed"). The small sample of those unemployed does not allow for meaningful inferences about this group; moreover, this work status is likely considered a temporary status among mothers and not necessarily reflective of their consistent time use. Thus, estimates for the unemployed are not emphasized in the discussion of the results. For context, education-related patterns in maternal employment status across all ATUS waves are presented in Figure A2, panels a–d, in the online appendix. These estimates display the differential effects of the 2008–2009 recessionary period.

Covariates

We include an array of covariates to account for the association between period, education, and work and active childcare time, as well as to shed light on how much compositional changes accounted for the patterns of results. These covariates reflect seven domains, including time constraints (e.g., work, schooling), child demands (e.g., number and age of children), and resources (e.g., income, having a partner), that can affect parenting time. First, *demographics* include mothers' *age* (continuous in years), *race/ethnicity* (dummy coded non-Hispanic White, non-Hispanic Black, Hispanic White, Asian, or some other race/ethnicity), and *nativity* (1=foreign-born). Second, *income* is based on *annual family income*, measured on an ordinal scale ranging from 1=less than \$5,000 through 16=\$150,000 and higher.² Third, a *work and student* component includes *employment status* (detailed earlier) and *student status* (1=mother enrolled in formal education).³ Fourth, *children* includes the *number of household children* (a continuous measure) and *ages of children* (four binary measures indicating whether a child in the household was aged between 0–2 years, 3–5 years, 6–12 years, and 13–18 years). Fifth, *partner status* is a binary variable indicating whether the mother lived with a partner/spouse or was single.⁴ Sixth, *location* captures whether the family resided in a *metropolitan area* (1=yes) and *geographic region* (dummy coded Northeast, Midwest, South, and West). Seventh, *time diary* factors include binary measures for whether it was conducted on a *weekend*, in a *summer month*, or on a *holiday*.

Analytic Plan

For Aims 1 and 2, we use ordinary least squares (OLS) regression. Data are drawn from the 2003–2005 and 2015–2017 survey years and are pooled. Other modeling approaches (such as Tobit and other two-stage models) have often been used to examine time diary data; however, scholars have recently argued that OLS is a more appropriate and less biased estimator (Stewart 2013).⁵ This approach is also consistent with that of recent time-use studies (Musick et al. 2016).

As an initial step, we examine whether there was an upward trend in active care minutes from 2003–2005 to 2015–2017 as well as maternal education differences in

² Analyses are conducted with and without covariates that are considered endogenous to maternal education, such as income and marital status. These results are presented in Table A3 in the online appendix, along with results from the full model. Overall, the findings are substantively similar albeit more conservative after covariates are taken into account.

³ Given the differing time constraints among student mothers (e.g., Augustine et al. 2018) and the fact that students account for a much larger proportion of mothers with some college or an associate's degree compared with other education groups, the multivariate analyses are conducted with and without students as a sensitivity check. We find no statistical or substantive differences when students were excluded.

⁴ We do not distinguish between married and cohabiting mothers because this information was not consistently coded in earlier years. We also cannot identify whether the partner was a biological father to the children in the household.

⁵ We also apply Tobit models to check the robustness of the study findings. Active childcare time estimates from the Tobit models are uniformly lower across all education and work groups. However, there is no substantive differences in the education- and work-related gaps, nor are there changes in those gaps across periods from those estimated by the OLS regressions.

active parenting time, net of the covariates and work status (Model 1). To assess Aim 1, we interact the year and education measures (Model 2) to examine whether and how the slope between periods varies by education group. Next, to examine Aim 2, we add three-way interactions between education, period, and work status to explore whether the trends in active childcare time vary by mothers' work status (Model 3). To aid in the interpretation of the two-way and three-way interactions, we estimate average marginal effects based on the model coefficients across different combinations of education and work. Post-estimation Wald tests identify statistical differences.

For Aim 3, we conduct Blinder-Oaxaca decompositions⁶ to examine how much of the change in active childcare time from 2003–2005 to 2015–2017 within each education group (based on the results of Model 2) is accounted for by compositional changes in work status *vis-à-vis* behavioral change or other compositional factors, and within relevant work status \times education groups, what share of the gross change is due to behavioral change versus shifts in compositional factors (based on the results of Model 3). These decomposition procedures are represented as follows:

$$\bar{Y}_{15-17} - \bar{Y}_{03-05} = \Sigma(\bar{X}_{15-17} - \bar{X}_{03-05})\beta_{15-17} + \left[\Sigma \bar{X}_{03-05}(\beta_{15-17} - \beta_{03-05}) + (\alpha_{15-17} - \alpha_{03-05}) \right].$$

The terms \bar{Y}_{15-17} and \bar{Y}_{03-05} represent active parenting time for mothers in 2015–2017 and in 2003–2005, respectively. The portion of the time gap between mothers in 2003–2005 versus 2015–2017 that is explained by changes in sociodemographic factors is represented by $\Sigma(\bar{X}_{15-17} - \bar{X}_{03-05})\beta_{15-17}$, where \bar{X}_{15-17} and \bar{X}_{03-05} are the means of the predictor variables (i.e., all covariates) for each group of mothers (e.g., education group from Aim 1, education \times work group from Aim 2), and β_{15-17} represent the coefficients of the variables for mothers in 2015–2017. The portion of the gap left unexplained by compositional changes is represented as $\Sigma \bar{X}_{03-05}(\beta_{15-17} - \beta_{03-05})$. The $(\alpha_{15-17} - \alpha_{03-05})$ term captures the difference in intercepts between 2015–2017 and 2003–2005. These latter two pieces represent the portion of the gross change from 2003–2005 to 2015–2017 attributable to behavioral change (although we acknowledge unobserved and unmeasurable covariates could also be at play). This overall method of decomposing compositional change versus behavioral change is more common in other applications (e.g., gender and race/ethnicity pay gaps) but has also been used in studies examining explanations for shifts in time use (Babcock and Marks 2011; Genadek et al. 2016; Khitarishvili and Kim 2014; Pagán 2013). Because decomposition results can vary by the omitted category among dummy covariates, we follow recommended procedures of normalizing dummy variable effects and estimating their deviation from a grand mean (Yun 2005).

We estimate the decompositions using two approaches: the twofold decomposition and the Neumark averaged approach. These are generally considered the standard Blinder-Oaxaca decomposition methods (vs. threefold methods). Given that the primary focus is to estimate the proportion of change in parenting time that is explained by changes in the sociodemographic composition of education and work groups across the entire period, we focus on the results from the Neumark averaged

⁶ Although we use the more common terminology of *Blinder-Oaxaca decomposition*, this decomposition technique was first introduced by demographer Evelyn Kitagawa (1955), as highlighted in a discussion of the development of decompositions by Treiman (2009:175).

approach, which are based on the coefficients and means from the pooled sample. In contrast, the twofold decomposition estimates the changes in parenting time had the sociodemographic characteristics within each education group remained similar in 2003–2005 and 2015–2017. Overall, the results of both methods are similar. In the online appendix, Table A4 (education groups) and Table A6 (education \times work groups) present estimates from the twofold decompositions using the 2015–2017 coefficients with sociodemographic characteristics reflecting the 2003–2005 sample, and vice versa.

To address the small amount of missing data on the family income (6.30% missing) and metropolitan residence (0.01% missing) variables, we use multiple imputation and *mi estimate* in Stata to generate and analyze 100 data sets (StataCorp 2017). Listwise deletion, however, yields substantively similar results. We use the *oaxaca* Stata command to conduct the decomposition analyses (Jann 2008). We use the sample weight TUFNWGTP to account for the survey design.

Results

Table 1 displays sample characteristics by education and period. Mothers in the sample in 2015–2017 had higher levels of educational attainment (39% had a college degree) than mothers in 2003–2005 (29%), although the share of mothers who did not complete high school remained consistent (12% in 2003–2005 vs. 13% in 2015–2017). As expected, mothers with more education were more likely to be advantaged in other ways (e.g., full-time employment, higher incomes), with some of these advantages increasing between periods. For example, college-educated mothers were the only group for whom the proportion employed full-time increased from 2003–2005 to 2015–2017 (48% to 58%).

College-educated mothers in 2003–2005 spent the most time in active childcare, at 131 minutes per day, compared with 99 minutes for mothers with some college experience, 96 minutes for high school graduates, and 88 minutes for mothers who did not complete high school. In 2015–2017, however, this latter group of mothers spent 19 more minutes in active parenting (17% increase) than in 2003–2005. This upward trend was similar, albeit more modest, among those with a high school diploma only (12% increase). There was no change among those with some college experience. The trend was reversed, however, for college-educated mothers, who reduced their active parenting time by 17%. These two trends—declines in parenting time among mothers with a college degree and increases among mothers with less education—provide preliminary evidence of a narrowing childcare time gap.

Education Trends in Active Childcare Time, 2003–2005 to 2015–2017

Table 2 presents the multivariate regression results. In Model 1, we model the dichotomous measure of period, mothers' education dummy variables, and the full set of covariates to predict mothers' active childcare time (full model results presented in Table A3 in the online appendix). These results are consistent with prior research: with each level of education, mothers spent more time in active childcare. Contrary

Table 1 Sample description by maternal education from 2003–2005 to 2015–2017: Percentages and means

	No High School Diploma		High School Diploma		Some College		College Degree	
	2003–2005	2015–2017	2003–2005	2015–2017	2003–2005	2015–2017	2003–2005	2015–2017
Time Outcome								
Active childcare time (mean)	87.80 (102.81)	107.29* (121.89)	96.06 (110.94)	108.59* (121.60)	99.46 (108.90)	99.53 (112.02)	130.56 (127.95)	117.71* (119.16)
Work								
Maternal employment status (%)								
Full time	24.56	21.13	41.32	36.66*	46.87	48.85	47.99	57.53*
Part time	14.10	15.90	20.97	19.65	25.77	21.92	24.35	19.15*
Not working	49.95	53.54	30.31	37.27*	23.09	23.99	24.97	21.08*
Unemployed	11.40	9.43*	7.41	6.41	4.27	5.24	2.68	2.24
Student (%)	5.82	3.27	5.48	4.66	14.90	13.53	7.49	5.89*
Demographics								
Age (mean)	30.84 (8.56)	34.02* (9.10)	32.86 (8.13)	33.24 (8.29)	34.05 (7.60)	34.43 (8.03)	37.28 (6.41)	37.69* (6.80)
Race/ethnicity (%)								
Non-Hispanic White	20.35	19.39	56.83	47.91*	70.47	59.28*	78.09	69.76*
Non-Hispanic Black	14.70	9.39	18.32	14.31	12.52	16.42*	7.23	7.48
Hispanic White	57.31	63.28*	19.92	29.43*	11.60	17.24*	6.51	9.14*
Asian	1.05	1.91	1.42	4.66*	1.61	3.19*	7.07	11.32*
Other race	6.58	6.02	3.51	3.69	3.80	3.87	1.11	2.30*
Foreign-born (%)	54.38	63.53*	18.00	30.49*	9.94	16.83*	15.05	21.67*
Income								
Annual family income (1–16 scale, mean)	6.51 (3.48)	7.73* (3.69)	8.96 (3.69)	9.52* (3.96)	10.61 (3.34)	10.93* (3.73)	13.11 (2.34)	13.75* (2.72)

Table 1 (continued)

	No High School Diploma		High School Diploma		Some College		College Degree	
	2003–2005	2015–2017	2003–2005	2015–2017	2003–2005	2015–2017	2003–2005	2015–2017
Children								
Number of children (mean)	2.22 (1.13)	2.40* (1.21)	2.01 (0.98)	2.03 (1.01)	2.03 (0.97)	2.03 (1.06)	1.96 (0.91)	1.95 (0.87)
Age of children (%)								
0–2 years	39.70	38.09	33.18	36.54	31.96	31.63	35.90	35.36
3–5 years	40.29	37.23	33.80	34.85	32.87	33.85	36.88	35.30
6–12 years	65.51	72.77*	66.94	63.78	69.61	67.94	61.85	63.58
13–18 years	23.45	33.96*	25.27	27.01	24.82	26.12	20.63	21.30
Partner								
Married/cohabiting	67.60	64.72	71.39	69.08	75.38	70.61*	90.27	89.69
Single	32.40	35.28	28.61	30.92	24.62	29.39*	9.73	10.31
Location								
Metropolitan residence	82.17	88.42*	77.55	83.60*	79.54	83.93*	89.20	91.19*
Region								
Northeast	11.80	12.10	18.36	14.22*	16.59	12.73*	22.40	18.63*
Midwest	15.09	16.11	22.03	21.67	25.99	25.51	24.79	22.92*
South	39.19	45.77*	39.41	40.49	32.95	40.03*	31.36	36.13*
West	33.92	26.01*	20.20	23.61*	24.247	21.73	21.45	22.32*
% of Sample Within Period	13.49	12.19	30.26	22.61	27.61	26.35	28.64	38.85
N	914	435	2,283	920	2,650	1,403	2,901	2,249

Notes: Standard deviations are shown in parentheses. The table presents unweighted *ns* and weighted percentages and means.

*Chi-square and *t* tests indicating statistically different at $p < .05$ from mothers with same levels of education in 2003–2005.

Table 2 Predicting active childcare time with children among mothers (*n*=13,755)

	(1)	(2)	(3)
Period 2015–2017 (ref. =2003–2005)	1.53 (2.34)	-7.48* (3.55)	-4.27 (4.25)
Education (ref. =college degree)			
No high school diploma	-31.13*** (4.82)	-43.89*** (5.46)	-24.48*** (7.35)
High school diploma	-18.11*** (3.44)	-25.27*** (3.99)	-13.05** (4.85)
Some college	-12.79*** (2.84)	-17.80*** (3.51)	-8.24† (4.32)
Work Status (ref. =full-time employed)			
Part-time employed	26.81*** (2.69)	26.33*** (2.68)	37.06*** (5.87)
Not working	62.61*** (3.06)	62.08*** (3.04)	71.69*** (7.01)
Unemployed	32.45*** (5.55)	32.22*** (5.56)	22.34† (11.72)
Education × Period Interactions (ref. =college degree × 2003–2005)			
No high school diploma × 2015–2017		25.05** (8.03)	-0.78 (10.70)
High school diploma × 2015–2017		13.39* (6.17)	-5.76 (7.35)
Some college × 2015–2017		8.45 (5.24)	-0.87 (6.28)
Work Status × Year Interactions (ref. =full-time employed × 2003–2005)			
Part-time employed × 2015–2017			-5.61 (8.78)
Not working × 2015–2017			-8.31 (9.95)
Unemployed × 2015–2017			22.03 (19.64)
Work Status × Education Interactions (ref. =full-time employed × college degree)			
Part-time employed × No high school diploma			-28.37* (12.35)
Part-time employed × High school diploma			-20.63* (9.09)
Part-time employed × Some college			-20.68* (8.09)
Not working × No high school diploma			-30.24** (11.24)
Not working × High school diploma			-25.29** (9.79)
Not working × Some college			-21.49* (9.47)
Unemployed × No high school diploma			-4.62 (15.85)
Unemployed × High school diploma			1.85 (16.57)
Unemployed × Some college			19.30 (14.59)

Table 2 (continued)

	(1)	(2)	(3)
Work Status × Education × Period Interactions (ref. = college degree × full-time employed × 2003–2005)			
Part-time employed × No high school diploma × 2015–2017			38.99* (18.64)
Part-time employed × High school diploma × 2015–2017			26.11† (14.68)
Part-time employed × Some college × 2015–2017			10.87 (12.37)
Not working × No high school diploma × 2015–2017			41.29* (17.91)
Not working × High school diploma × 2015–2017			39.72* (15.97)
Not working × Some college × 2015–2017			28.51† (15.06)
Unemployed × No high school diploma × 2015–2017			-16.94 (33.95)
Unemployed × High school diploma × 2015–2017			-4.81 (27.27)
Unemployed × Some college × 2015–2017			-26.55 (30.39)
R^2	.26	.27	.27

Notes: Robust standard errors are shown in parentheses. Controls are included for maternal age; maternal race/ethnicity; maternal nativity; whether the respondent is a student; family income; family structure; number of children; age of children; metropolitan residence; region of residence; and whether the diary was conducted on a weekend, in a summer month, or on a holiday.

† $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$

to prior research on parenting time, however, there was no statistical difference in the amount of active childcare time among mothers in 2015–2017 compared with mothers in 2003–2005. In Model 2, we interact maternal education with period and find that the pattern varied by education. The significant interaction terms between period and those with less than a high school education ($\beta = 25.05$; $p < .01$) and those with a high school education ($\beta = 13.39$; $p < .05$) suggests that from 2003–2005 to 2015–2017, the trend in parenting time varied by education, and the time gap among mothers narrowed.

To better understand which group drove the narrowing time gap, we use the coefficients from Model 2 to predict minutes spent in active parenting by maternal education in each period. Figure 1 graphs these estimates, illustrating a narrowing of the education-related time gap from 2003–2005 to 2015–2017: the gap between the highest and lowest education groups decreased from 44 to 19 minutes (a 57% narrowing). The narrowing appears to have been driven by mothers with the lowest level of education, who reported a statistically significant increase in their parenting time from 80

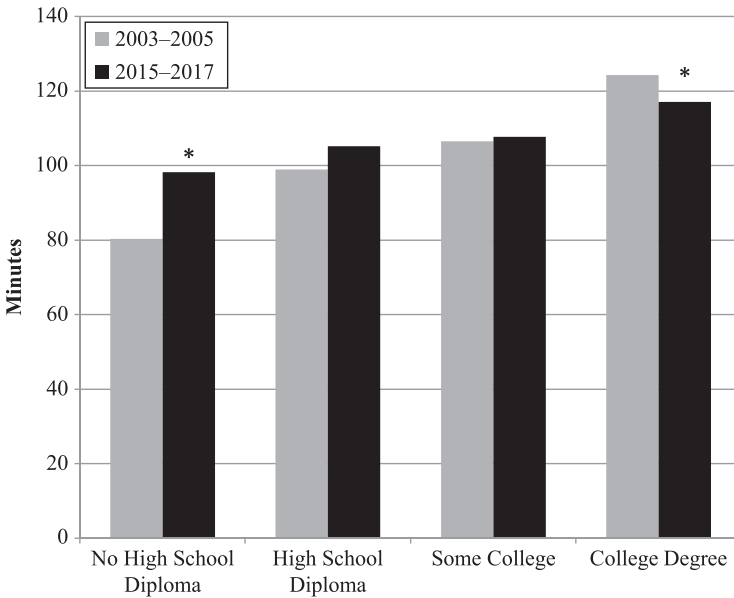


Fig. 1 Predicted active childcare minutes by maternal education in 2003–2005 and 2015–2017. For 2003–2005, there were statistical differences (at $p < .05$) across all education groups. For 2015–2017, there were statistical differences (at $p < .05$) between those with a college degree and the other education groups only; that is, there were no statistical differences between those with no high school diploma, a high school diploma, and some college experience. * Statistically different from the 2003–2005 period at $p < .05$ or better (post-hoc Wald tests).

to 98 minutes (18% of a standard deviation increase). College-educated mothers, on the other hand, modestly decreased their parenting time from 124 to 117 minutes—a statistically significant decline. The middle-tier groups also contributed to the narrowing of the time gap, although these increases were not statistically significant at conventional levels, with increases of 6 minutes per day for the high school–educated and just 1 minute for those with some college.

The Moderating Role of Mothers' Work Status

The second study aim is to determine whether these education-related patterns vary by work status. Of particular interest is whether the decrease in college-educated mothers' parenting time is concentrated among those in full-time work and whether the increase in parenting among less-educated mothers was driven by those who were not working or working part-time. The results (Model 3, Table 2) provide partial support for these expectations, as indicated by the combinations of significant and insignificant three-way interactions between work status, education, and period. To better examine these interactions, we estimate predicted minutes within each work-education-period group.

Panel a of Figure 2 presents estimates for mothers with less than a high school education. In the 2003–2005 period, full-time working mothers spent 60 minutes per day

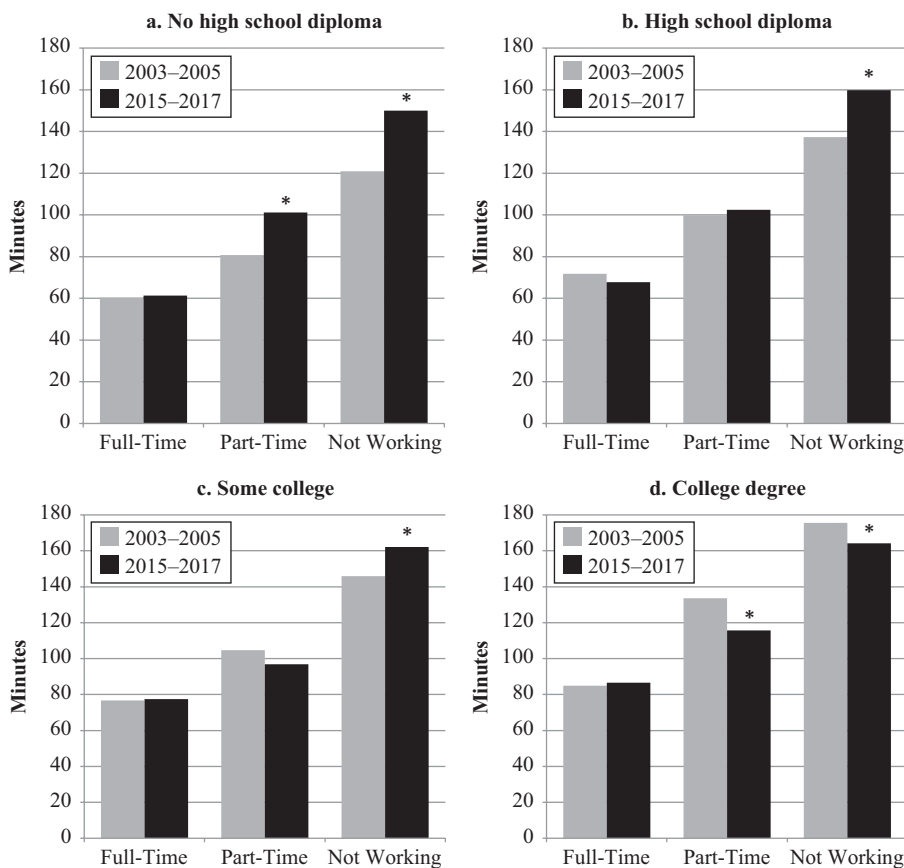


Fig. 2 Predicted active childcare minutes by maternal education and work status in 2003–2005 and 2015–2017. For full-time workers in 2003–2005, there were statistical differences (at $p < .05$) between those with a college degree or more and the other education groups; there were also statistical differences between those with no high school diploma and some college experience. For part-time workers in 2003–2005, there were statistical differences (at $p < .05$) between those with a college degree and the other education groups; there were also statistical differences between those with no high school diploma and some college experience. For women not working in 2003–2005, there were statistical differences (at $p < .05$) between those with a college degree and the other education groups; there were also statistical differences between those with no high school diploma and some college experience. For full-time workers in 2015–2017, there were statistical differences (at $p < .05$) between those with a college degree and the other education groups only (i.e., no statistical differences between those with no high school diploma, a high school diploma, and some college experience). For part-time workers in 2015–2017, there were statistical differences (at $p < 0.05$) between those with a college degree and those with no high school diploma and those with some college experience. For women not working in 2015–2017, there were statistical differences (at $p < .05$) between those with a college degree and those with no high school diploma/GED. * Statistically different from the 2003–2005 period at $p < .05$ or better (post-hoc Wald tests).

in active parenting time, whereas nonworking mothers spent 120 minutes in parenting time. Yet in 2015–2017, mothers who did not work increased this time to 150 minutes (24% increase), but full-time working mothers’ active childcare time remained unchanged. Part-time working mothers displayed a similar trend to those who did not work, increasing their parenting time from 81 minutes in 2003–2005 to 101 minutes

in 2015–2017. Thus, the results observed in Model 2 for lower-educated mothers appear to be driven by those who did not work full-time. This pattern is also similar for mothers with a high school education (panel b) or some college experience (panel c), albeit statistically significant only among those not working. The pattern of results for college-educated mothers was unexpected (panel d): college-educated mothers who worked full-time spent statistically similar amounts of time in active childcare in 2003–2005 and 2015–2017 (85 and 87 minutes, respectively), but mothers who worked part-time or who did not work spent statistically *less* time in active childcare in 2015–2017 than in 2003–2005 (decreases of 13% and 7%, respectively). Thus, the decline in active childcare time among higher-educated mothers was not driven by mothers working full-time but instead by those not working or working part-time.

Decomposing Changes in Active Childcare Time by Education

Next, we examine compositional factors driving these patterns to address Aim 3, exploring whether the trends observed as part of Aim 1 can be explained by compositional changes in higher- and lower-educated mothers' access to full-time work and whether patterns observed in Aim 2 are linked to compositional changes among both higher- and lower-educated mothers who did not work full-time. To do so, we use of Blinder-Oaxaca decomposition analyses, focusing on the Neumark averaged approach. In each table (Tables 3 and 4), the “explained” rows represent the portion of the gross change in mothers' active parenting time from 2003–2005 to 2015–2017 accounted for by changes in the sociodemographic characteristics within each education group. The “unexplained” rows represent the portion of the gross change not accounted for by changes in the covariates over time—the portion that is generally taken to reflect behavioral change (Genadek et al. 2016).

Among the education group with the greatest increase in active childcare time—mothers who did not complete high school—79% of this increase is *unexplained* by changes in the sociodemographic composition of this group. A smaller amount—albeit still the majority—of the gross change (55%) is unexplained by compositional shifts among mothers with a high school education. For college-educated mothers, about one-half of their decrease in parenting time from 2003–2005 to 2013–2017 is explained by compositional changes. We do not discuss the statistically insignificant increase among mothers with some college experience, although note that the sociodemographic characteristics in this group shifted in ways that would normally suggest *less* time spent in active childcare (such as being older), as indicated by the negative “explained” portion of the increase.

To understand the extent to which decreases in college-educated mothers' active parenting time was driven by compositional changes in labor force participation, we disaggregate the components of the explained portions of the gross change. Although covariates are included in the model individually, for ease of presentation, the table provides a summary of the covariates by category (e.g., “demographics” reflects the aggregate contribution of the covariates: mothers' age, race/ethnicity, and nativity). Results for the individual covariates appear in Table A5 in the online appendix, along with the results for the unexplained portion. These disaggregations reveal that for college-educated mothers, increases in access to full-time work explain 34% of their

Table 3 Explained and unexplained portions of the gap in active childcare time between 2003–2005 and 2015–2017 by education (Blinder-Oaxaca decomposition)

	No High School Diploma		High School Diploma		Some College		College Degree	
	Minutes	95% CI	Minutes	95% CI	Minutes	95% CI	Minutes	95% CI
Neumark Decomposition								
Gross change (minutes)	19.49	[6.13, 32.85]	12.53	[2.73, 22.32]	0.07	[-7.49, 7.63]	-12.85	[-19.59, -6.11]
Explained (composition): Minutes	4.15	[-0.77, 9.08]	5.69	[3.38, 8.00]	-1.01	[-2.63, 0.61]	-5.33	[-6.85, -3.81]
% of gross change	21.29		45.41		-1,442.86		41.48	
Unexplained (rates): Minutes	15.34	[1.09, 29.58]	6.84	[-3.06, 16.74]	1.08	[-6.59, 8.74]	-7.52	[-14.50, -0.54]
% of gross change	78.66		54.59		1,542.86		58.52	
Decomposition Details								
Explained (composition) total	4.15	[-0.77, 9.08]	5.69	[3.38, 8.00]	-1.01	[-2.63, 0.61]	-5.33	[-6.85, -3.81]
Demographics	1.87	[-1.32, 5.06]	-1.47	[-3.27, 0.33]	-1.86	[-3.03, -0.70]	-0.53	[-1.37, 0.30]
Income	-1.72	[-3.47, 1.27]	0.54	[-0.24, 1.32]	0.45	[0.06, 0.85]	1.57	[0.64, 2.50]
Work	2.94	[1.98, 3.89]	3.97	[3.11, 4.83]	0.53	[0.11, 0.95]	-4.31	[-5.06, -3.57]
Children	-2.12	[-4.02, -0.21]	2.60	[2.06, 3.14]	-0.19	[0.40, 0.02]	-1.70	[-1.92, -1.49]
Partner	0.44	[-0.07, 0.95]	0.28	[0.03, 0.54]	0.19	[-0.29, 0.67]	0.07	[0.00, 0.15]
Location	1.75	[0.09, 3.42]	-0.25	[-1.24, 0.74]	-0.05	[-0.82, 0.72]	-0.32	[-0.82, 0.17]
Time diary	0.98	[0.36, 1.61]	0.00	[-0.47, 0.48]	-0.08	[-0.12, -0.05]	-0.11	[-0.36, 0.15]
<i>N</i>	1,349		3,203		4,053		5,150	

Notes: *Demographics* are race/ethnicity, nativity, and age. *Work* is work status (full-time, part-time, not working, or unemployed) and student status. *Children* includes the number and age of children. *Partner* is whether there is a partner in the household. *Location* is geographic region and whether living in a metropolitan area. *Time diary* is whether the diary was conducted on a weekend, in a summer month, or on a holiday. CI=confidence interval.

Table 4 Explained and unexplained portions of the gap in active childcare time between 2003–2005 and 2015–2017 among those not working by education (Blinder-Oaxaca decomposition)

	Less Than High School Diploma		High School Diploma		Some College		College Degree	
	Minutes	95% CI	Minutes	95% CI	Minutes	95% CI	Minutes	95% CI
Neumark Decomposition								
Gross change (minutes)	31.52	[11.41, 51.63]	26.76	[6.62, 46.91]	19.83	[1.28, 38.39]	-23.34	[-39.58, -7.09]
Explained (composition): Minutes	6.92	[-1.31, 15.14]	4.24	[-1.23, 9.71]	7.94	[4.67, 11.21]	-13.63	[-18.83, -8.42]
% of the gross change	21.95		15.84		40.04		58.40	
Unexplained (rates): Minutes	24.60	[3.04, 46.17]	22.52	[1.57, 43.48]	11.89	[-6.76, 30.55]	-9.71	[-26.76, 7.34]
% of the gross change	78.05		84.16		59.96		41.60	
Decomposition Details								
Explained (composition) total	6.92	[-1.31, 15.14]	4.24	[-1.23, 9.71]	19.83	[1.28, 38.39]	-13.63	[-18.83, -8.42]
Demographics	7.03	[0.64, 13.41]	-3.70	[-7.88, 0.47]	-1.41	[-4.41, 1.58]	0.46	[-4.31, 5.22]
Income	-3.78	[-7.25, -0.31]	0.65	[-1.37, 2.68]	0.05	[-0.12, 0.22]	0.67	[-0.80, 1.95]
Work	1.38	[0.46, 2.29]	0.74	[0.41, 1.08]	0.74	[0.29, 1.20]	-0.31	[-0.49, -0.12]
Children	2.18	[-2.51, 6.87]	6.73	[4.83, 8.64]	5.44	[4.48, 6.40]	-12.75	[-15.00, -10.49]
Partner	-1.33	[-2.93, 0.28]	0.06	[-0.04, 0.16]	-0.05	[-0.17, 0.06]	-0.24	[-0.60, 0.11]
Location	0.89	[-2.15, 3.93]	1.17	[-1.34, 3.68]	1.94	[0.99, 2.88]	-0.64	[-1.99, 0.71]
Time diary	0.54	[-1.05, 2.14]	-1.42	[-2.43, -0.41]	1.24	[0.53, 1.94]	-0.82	[-1.46, -0.17]
N	665		988		939		1,180	

Notes: *Demographics* are race/ethnicity, nativity, and age. *Work* is work status (full-time, part-time, not working, or unemployed) and student status. *Children* includes the number and age of children. *Partner* is whether there is a partner in the household. *Location* is geographic region and whether living in a metropolitan area. *Time diary* is whether the diary was conducted on a weekend, in a summer month, or on a holiday. CI=confidence interval.

overall gross change (−4.31 minutes explained by changes in work divided by −12.85 minutes gross change). The remainder of the explained change is due to college-educated mothers' lower likelihood of having young children (reflecting trends in delayed fertility), being older, and being more racially/ethnically diverse in 2015–2017 than 2003–2005.

For mothers with a high school diploma/GED or less, the smaller amounts of gross change attributable to compositional factors are driven by *decreases* in access to full-time work. Roughly 15% and 32% of the increase in parenting time can be attributed to declining rates of full-time employment for those with a high school education and those with less than a high school education.

Examining Compositional Changes Within Education and Employment Groups

Last, applying Blinder-Oaxaca decomposition within each education and work combination, we explore the compositional factors driving the observed education-related trends among mothers *not* working—the employment group for whom parenting time had changed (Table 4). Results for mothers who were working part- or full-time or unemployed appear in Tables A6 and A7 of the online appendix.

For mothers who did not complete high school and were not working, the bulk of their increase in parenting time (78%) is unexplained by compositional changes. The proportion unexplained by compositional change is more pronounced among nonworking mothers with a high school education (84%) but less pronounced for those with some college experience (60%). Conversely, for nonworking mothers with a college degree, a larger share of their decrease in parenting time is explained by compositional change (58%). Chief among those factors are declines in the number of children and proportion with young children.

Discussion

The amount of time that mothers spend with their children was once at the center of the debate around whether women should work. More recently, the debate has shifted to whether some mothers are spending too much time with children and to the consequences of this trend for inequality in children's development and women's labor opportunities and psychological health (Henderson et al. 2016; Kalil 2015; Stone 2007). One key issue with the discourse around this issue, however, is that it tends to assume that SES-related trends in time-intensive parenting observed in the past have continued into the present. We test this assumption, with three important findings emerging.

First, consistent with previous research cautioning that current trends were unsustainable (Kalil et al. 2012; Nelson 2010), college-educated mothers decreased the amount of time they spent in active childcare from 2003–2005 to 2015–2017. These findings are contrary to what had been viewed as an ever-increasing ramping up of middle-class mothers' parenting. Meanwhile, mothers with the lowest levels of education continued to increase their active childcare time during this period. The combination of these two trends led to a significant narrowing in the education-related time

gap, which in 2003–2005 was largest (at 44 minutes) between mothers with the most education and mothers with the least. This narrowing amounted to a 57% decrease in the gap for mothers who did not complete high school (leaving a 19-minute gap), a 53% decrease for mothers with a high school education (12-minute gap), and a 47% decrease for mothers with some college experience (9-minute gap). Although statistical differences in parenting time persist between mothers with a college degree and those without, there is no statistical difference in parenting time among those with different education levels below a college degree.

Second, only college-educated women who worked part-time or not at all decreased their parenting time. Full-time working mothers spent a similar amount of time in active parenting in 2015–2017 as they did in 2003–2005. This finding runs counter to our hypothesis, in which we anticipated that higher-educated employed mothers would be challenging mothering norms more so than their counterparts who worked part-time or not at all.

We offer two alternative explanations for this pattern of results. First, recent discussions about whether increases in parenting time have diminishing returns for children and about the negative consequences for women's psychological health (Henderson et al. 2016; Milkie et al. 2015) may be most salient for mothers who were spending the greatest amount of time with children and for whom the family schema is strongest (Blair-Loy 2009).

Second, such women may also be relying more on nonparental childcare, which has increased not only among lower-SES mothers but also among nonworking mothers from higher-SES families (Bassok et al. 2016). This pattern may reflect that mothers who can afford the high price of center-based care and have increased their financial investments in their children (Kornrich and Furstenberg 2013) recognize the academic advantages of formal care (Augustine et al. 2009). We provide some evidence of this trend in the online appendix, in which we show that the decline in college-educated nonworking mothers' active childcare time is stronger for mothers of young children (Table A2). Indeed, if the decline in active childcare time, particularly among high-SES mothers, is driven by increases in other highly enriching activities (e.g., childcare or extracurricular activities), the decline represents less of a shift away from active childcare time as a substitution for someone else's high-quality and expert time (e.g., early education teacher, coach).

The gains in active parenting time made among mothers *without* college degrees were among mothers not in paid employment; for this group, however, patterns likely reflect the diffusion of intensive parenting norms and the impact of varying public programs. These findings potentially suggest that higher education is a weaker means of differentiating parenting time than in past decades. The nonsignificant increase in active childcare time of lower-educated mothers working full-time likely reflected time constraints imposed by the type of jobs available, which are of lower quality, offer less flexibility and autonomy, and require more nonstandard scheduling (Hepburn 2019).

Third, the results of decompositions highlight that a majority of the increase in parenting time among mothers without college degrees is attributable to behavioral changes, not sociodemographic composition changes. These findings again point to the potential role of the continued diffusion of parental norms from higher- to lower-educated mothers and an equilibrium in time use among higher-educated mothers.

For mothers with college degrees, more than one-half (59%) of the decline in parenting time is attributed to behavioral change. One-third of the decline, however, is explained by higher rates of full-time work. At the same time, our results also suggest that these jobs allow college-educated mothers to spend more time in active childcare than jobs available to less-educated mothers. Thus, the remaining education-related gap in active parenting time should be considered in the context of economic shifts that have moved a greater share of college-educated women into higher-status segments of the workplace (Clawson and Gerstel 2014).

This study should be considered in light of its limitations. First, and most importantly, there may be unobservable and unmeasurable covariates that may explain trends in active parenting time. For example, for-profit and online colleges, which proliferated during the 2000s, may not offer the same socialization experience as brick-and-mortar colleges. Thus, the power of higher education to diffuse a certain parenting model may have diminished. Second, time diary data do not capture qualitative aspects of parent-child interactions, such as sensitivity and positive and negative regard (Calarco 2014; Lareau 2011). Thus, the implications of our parenting time measure for children's development remains unclear. Our findings, however, make sense in light of recent evidence of narrowing school readiness gaps (Reardon and Portilla 2016), which some scholars have argued are the result of changes in lower-SES mothers' parenting (Reardon et al. 2016). We also cannot provide empirical insights as to what is driving the behavioral shifts we observe, although ancillary analyses provide some clues (Table A2, online appendix). These tests reveal that for developmentally rich activities (e.g., reading, playing), education-related trends were similar to those we report; however, there was no education-related shift for "any time with children present." This pattern suggests that increases in active childcare time were not the result of a spillover that comes from low-SES mothers spending more time generally with children or from diminishing access to full-time work.

Future research should explore the SES-related trends in time-intensive parenting in other countries. Although SES gradients exist outside the United States, the American context does not offer the same opportunity to negotiate work around family life that is available in other countries (Collins 2019). Thus, it remains unclear whether, for example, full-time working mothers without college degrees would not have increased their active childcare time had they lived in a country more amenable to work-family balance. Similarly, access to high-quality childcare is publicly funded in many other developed countries but remains out of reach for many American families (Collins 2019). The findings could also be further unpacked by examining mothers' weekend versus weekday schedules in tandem with the contributions of fathers' time to the patterns we observe; regarding the latter, however, sensitivity analyses reveal that SES differences in fathers' time likely do not explain the results in this study, aligning with prior research demonstrating family structure as less influential on mothers' parenting time than other factors (Lemmon et al. 2018). It would also be beneficial to examine trends in shared family time: research suggests that time when both parents are present represents a large portion of the SES gap in parenting time (Vinopal and Gershenson 2017). Although the education-related time gap has narrowed, a potentially widening gap in shared time would represent a new source of inequality.

In sum, this study explores what has been assumed to be the snowballing parenting time commitment from high-SES mothers and growing inequality in time

among more- and less-advantaged children, finding that this phenomenon is reversing course. Of course, higher-SES mothers continue to feel parenting pressure and have shifted to other strategies that bolster their children's social class position; for example, Schneider et al. (2018) found a growing class divide in financial investments in children. In addition, increases in parenting time for lower-SES families may not be unequivocally good. Indeed, we find that active childcare time has displaced time in work and in leisure for mothers with less education (analyses available upon request), creating a developmental conundrum: children of less-educated mothers gained more active parenting time, but their mothers lost time in activities that promoted their well-being via other avenues (e.g., income, mental health). Nevertheless, these findings suggest that mothers across the educational gradient are more likely now than at any other time since the 1950s to similarly engage in the time-intensive parenting behaviors that took hold among high-SES mothers during the 1980s. Moreover, the findings highlight that structural—rather than behavioral—factors contribute to the remaining education-related gap, suggesting that women's work creates both opportunities for, and constraints to, balancing work and family. ■

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References

- Altintas, E. (2016). The widening education gap in developmental child care activities in the United States, 1965–2013. *Journal of Marriage and Family*, 78, 26–42.
- Augustine, J. M. (2014). Maternal education and the unequal significance of family structure for children's early achievement. *Social Forces*, 93, 687–718.
- Augustine, J. M., Cavanagh, S. E., & Crosnoe, R. (2009). Maternal education, early child care and the reproduction of advantage. *Social Forces*, 88, 1–29.
- Augustine, J. M., Prickett, K. C., & Negraia, D. V. (2018). Doing it all? Mothers' college enrollment, time use, and affective well-being. *Journal of Marriage and Family*, 80, 963–974.
- Babcock, P., & Marks, M. (2011). The falling time cost of college: Evidence from half a century of time use data. *Review of Economics and Statistics*, 93, 468–478.
- Bassok, D., Finch, J. E., Lee, R., Reardon, S. F., & Waldfogel, J. (2016). Socioeconomic gaps in early childhood experiences: 1998 to 2010. *AERA Open*, 2(3). <https://doi.org/10.1177/2332858416653924>
- Belsky, J., & Eggebeen, D. (1991). Early and extensive maternal employment and young children's socio-emotional development: Children of the National Longitudinal Survey of Youth. *Journal of Marriage and the Family*, 53, 1083–1098.
- Bianchi, S. M. (2000). Maternal employment and time with children: Dramatic change or surprising continuity? *Demography*, 37, 401–414.
- Bianchi, S. M. (2011). Family change and time allocation in American families. *Annals of the American Academy of Political and Social Science*, 638, 21–44.
- Blair-Loy, M. (2009). *Competing devotions: Career and family among women executives*. Cambridge, MA: Harvard University Press.
- Bodovski, K., & Farkas, G. (2008). 'Concerted cultivation' and unequal achievement in elementary school. *Social Science Research*, 37, 903–919.

- Bryant, W. K., & Zick, C. D. (1996). An examination of parent-child shared time. *Journal of Marriage and the Family*, 58, 227–237.
- Calarco, J. M. (2014). Coached for the classroom: Parents' cultural transmission and children's reproduction of inequalities. *American Sociological Review*, 79, 1015–1037.
- Christopher, K. (2012). Extensive mothering: Employed mothers' constructions of the good mother. *Gender & Society*, 26, 73–96.
- Clawson, D., & Gerstel, N. (2014). *Unequal time: Gender, class, family in employment schedules*. New York, NY: Russel Sage Foundation.
- Collins, C. (2019). *Making motherhood work: How women manage careers and caregiving*. Princeton, NJ: Princeton University Press.
- Crosnoe, R., Augustine, J. M., & Huston, A. C. (2012). Children's early child care and their mothers' later involvement with schools. *Child Development*, 83, 758–772.
- Crosnoe, R., & Huston, A. C. (2007). Socioeconomic status, schooling, and the developmental trajectories of adolescents. *Developmental Psychology*, 43, 1097–1110.
- Cui, M., Darling, C. A., Coccia, C., Funcham, F. D., & May, R. W. (2019). Indulgent parenting, helicopter parenting, and well-being of parents and emerging adults. *Journal of Child and Family Studies*, 28, 860–871.
- Desai, S., Chase-Lansdale, P. L., & Michael, R. T. (1989). Mother or market? Effects of maternal employment on the intellectual ability of 4-year-old children. *Demography*, 26, 545–561.
- Doepke, M., & Zilibotto, F. (2019). *Love, money, and parenting: How economics explains the way we raise our kids*. Princeton, NJ: Princeton University Press.
- Dotti Sani, G. M., & Treas, J. (2016). Educational gradients in parents' child-care time across countries, 1965–2012. *Journal of Marriage and Family*, 78, 1083–1096.
- Folbre, N., & Bittman, M. (2004). *Family time: The social organization of care*. London, UK: Routledge.
- Gauthier, A. H., Smeeding, T. M., & Furstenberg, F. F., Jr. (2004). Are parents investing less time in children? Trends in selected industrialized countries. *Population and Development Review*, 30, 647–671.
- Genadek, K. R., Flood, S. M., & Roman, J. G. (2016). Trends in spouses' shared time in the United States, 1965–2012. *Demography*, 53, 1801–1820.
- Gerson, K. (2011). *The unfinished revolution: Coming of age in a new era of gender, work, and family*. Oxford, UK: Oxford University Press.
- Givertz, M., & Segrin, C. (2014). The association between overinvolved parenting and young adults' self-efficacy, psychological entitlement, and family communication. *Communication Research*, 41, 1111–1136.
- Goldin, C., & Katz, L. F. (2010). *The race between education and technology*. Cambridge, MA: Belknap Press of Harvard University Press.
- Gunderson, J., & Barrett, A. E. (2017). Emotional cost of emotional support? The association between intensive mothering and psychological well-being in midlife. *Journal of Family Issues*, 38, 992–1009.
- Guryan, J., Hurst, E., & Kearney, M. (2008). Parental education and parental time with children. *Journal of Economic Perspectives*, 22(3), 23–46.
- Hays, S. (1996). *The cultural contradictions of motherhood*. New Haven, CT: Yale University Press.
- Henderson, A., Harmon, S., & Newman, H. (2016). The price mothers pay, even when they are not buying it: Mental health consequences of idealized motherhood. *Sex Roles*, 74, 512–526.
- Hepburn, P. (2019). Work scheduling for American mothers, 1990 and 2012. *Social Problems*, 67, 741–762.
- Ishizuka, P. (2019). Social class, gender, and contemporary parenting standards in the United States: Evidence from a national survey experiment. *Social Forces*, 98, 31–58.
- Jacobs, J. A., & Gerson, K. (2004). *The time divide*. Cambridge, MA: Harvard University Press.
- Jann, B. (2008). The Blinder-Oaxaca decomposition for linear regression models. *Stata Journal*, 8, 453–479.
- Johnston, D. D., & Swanson, D. H. (2006). Constructing the “good mother”: The experience of mothering ideologies by work status. *Sex Roles*, 54, 509–519.
- Kalil, A. (2015). Inequality begins at home: The role of parenting in the diverging destinies of rich and poor children. In P. R. Amato, A. Booth, S. M. McHale, & J. Van Hook (Eds.), *Families in an era of increasing inequality* (pp. 63–82). New York, NY: Springer.
- Kalil, A., & Mayer, S. E. (2016). Understanding the importance of parental time with children: Comment on Milkie, Nomaguchi, and Denny (2015). *Journal of Marriage and Family*, 78, 262–265.
- Kalil, A., Ryan, R. M., & Corey, M. (2012). Diverging destinies: Maternal education and the developmental gradient in time with children. *Demography*, 49, 1361–1383.

- Kalleberg, A. L. (2011). *Good jobs, bad jobs: The rise of polarized and precarious employment systems in the United States, 1970s to 2000s*. New York, NY: Russell Sage Foundation.
- Khitarishvili, T., & Kim, K. (2014). *The Great Recession and unpaid work time in the United States: Does poverty matter?* (Levy Economics Institute, Working Paper No. 806). Annandale-on-Hudson, NY: Levy Economics Institute of Bard College.
- Kingston, P. W., Hubbard, R., Lapp, B., Schroeder, P., & Wilson, J. (2003). Why education matters. *Sociology of Education*, 76, 53–70.
- Kitagawa, E. (1955). Components of a difference between two rates. *Journal of the American Statistical Association*, 50, 1168–1194.
- Kornrich, S., & Furstenberg, F. (2013). Investing in children: Changes in parental spending on children, 1972–2007. *Demography*, 50, 1–23.
- Lareau, A. (2003). *Unequal childhoods: Class, race, and family life*. Berkeley: University of California Press.
- Lareau, A. (2011). *Unequal childhoods: Class, race, and family life, with an update a decade later*. Berkeley: University of California Press.
- Lemmon, M., Patterson, S., & Martin, M. A. (2018). Mothers' time and relationship with their adolescent children: The intersecting influence of family structure and maternal labor force participation. *Journal of Family Issues*, 39, 2709–2731.
- LeMoynes, T., & Buchanan, T. (2011). Does "hovering" matter? Helicopter parenting and its effect on well-being. *Sociological Spectrum*, 31, 399–418.
- Locke, J. Y., Campbell, M. A., & Kavanagh, D. (2012). Can a parent do too much for their child? An examination by parenting professionals of the concept of overparenting. *Australian Journal of Guidance and Counselling*, 22, 249–265.
- Magnuson, K., & Waldfogel, J. (2016). Trends in income-related gaps in enrollment in early childhood education: 1968 to 2013. *AERA Open*, 2(2). <https://doi.org/10.1177/2332858416648933>
- McLanahan, S. (2004). Diverging destinies: How children are faring under the Second Demographic Transition. *Demography*, 41, 607–627.
- McLanahan, S., & Percheski, C. (2008). Family structure and the reproduction of inequalities. *American Review of Sociology*, 34, 257–276.
- Milkie, M. A., Nomaguchi, K., & Denny, K. E. (2015). Does the amount of time mothers spend with children and adolescents matter? *Journal of Marriage and Family*, 77, 355–372.
- Mirowsky, J., & Ross, C. E. (2003). *Education, social status, and health*. New York, NY: Transaction.
- Musick, K., Meier, A., & Flood, S. (2016). How parents fare: Mothers' and fathers' subjective well-being in time with children. *American Sociological Review*, 81, 1069–1095.
- National Center for Education Statistics. (2018). *Unemployment rates of females 16 to 64 years old, by age group and highest level of educational attainment: Selected years, 1975 through 2017* (Table 501.90) (Digest of Education Statistics: 2017 Report). Washington, DC: National Center for Education Statistics. Retrieved from <https://nces.ed.gov/programs/digest/d17/>
- Nelson, M. K. (2010). *Parenting out of control: Anxious parents in uncertain times*. New York: New York University Press.
- Nomaguchi, K., & Milkie, M. A. (2020). Parenthood and well-being: A decade in review. *Journal of Marriage and Family*, 82, 198–223.
- Pagán, R. (2013). Time allocation of disabled individuals. *Social Science & Medicine*, 84, 80–93.
- Parker, K., & Wang, W. (2013). Americans' time at paid work, housework, child care, 1965 to 2011. In *Modern parenthood: Roles of moms and dads converge as they balance work and family* (pp. 32–38). Washington, DC: Pew Research Center.
- Prickett, K. C., & Augustine, J. M. (2016). Maternal education and investments in children's health. *Journal of Marriage and Family*, 78, 7–25.
- Ramey, G., & Ramey, V. A. (2009). *The rug rat race* (NBER Working Paper No. 15284). Cambridge, MA: National Bureau of Economic Research.
- Reardon, S. F., & Portilla, X. A. (2016). Recent trends in income, racial, and ethnic school readiness gaps at kindergarten entry. *AERA Open*, 2(3). <https://doi.org/10.1177/2332858416657343>
- Reardon, S. F., Waldfogel, J., & Bassok, D. (2016, August 26). The good news about educational inequality. *The New York Times*. Retrieved from <http://www.nytimes.com/2016/08/28/opinion/sunday/the-good-news-about-educational-inequality.html>
- Reeves, R. V. (2017). *Dream hoarders: How the American upper middle class is leaving everyone else in the dust, why that is a problem, and what to do about it*. Washington, DC: Brookings Institution Press.

- Rizzo, K. M., Schiffrin, H. H., & Liss, M. (2013). Insight into the parenthood paradox: Mental health outcomes of intensive mothering. *Journal of Child and Family Studies*, 22, 614–620.
- Rogers, E. M. (1995). *Diffusion of innovations*. New York, NY: Free Press.
- Sandberg, S. (2013). *Lean in: Women, work, and the will to lead*. New York, NY: Alfred A. Knop.
- Sayer, L. C., Bianchi, S. M., & Robinson, J. P. (2004). Are parents investing less in children? Trends in mothers' and fathers' time with children. *American Journal of Sociology*, 100, 1–43.
- Sayer, L. C., Gauthier, A. H., & Furstenberg, F. F., Jr. (2004). Educational differences in parents' time with children: Cross-national variations. *Journal of Marriage and Family*, 66, 1152–1169.
- Schneider, D., Hastings, O. P., & LaBriola, J. (2018). Income inequality and class divides in parental investments. *American Sociological Review*, 83, 475–507.
- StataCorp. (2017). *Stata Statistical Software: Release 15*. College Station, TX: StataCorp LLC.
- Stewart, J. (2013). Tobit or not Tobit. *Journal of Economic and Social Measurement*, 3, 263–290.
- Stoltzfus, E., & Lynch, K. E. (2009). *Home visitation for families with young children* (CRS Report No. R40705). Washington, DC: Congressional Research Service.
- Stone, P. (2007). *Opting out? Why women really quit careers and head home*. Berkeley: University of California Press.
- Stone, P., & Lovejoy, M. (2019). *Opting back in: What really happens when mothers go back to work*. Berkeley: University of California Press.
- Strang, D., & Soule, S. A. (1998). Diffusion in organizations and social movements: From hybrid corn to poison pills. *Annual Review of Sociology*, 24, 265–290.
- Treiman, D. J. (2009). *Quantitative data analysis: Doing social research to test ideas*. Hoboken, NJ: John Wiley & Sons.
- U.S. Department of Education. (2007). *Engaging parents in education: Lessons from five parental information and resource centers* (Innovations in Education report). Washington, DC: U.S. Department of Education.
- Vinopal, K., & Gershenson, S. (2017). Re-conceptualizing gaps by socioeconomic status in parental time with children. *Social Indicators Research*, 133, 623–643.
- Volger, C., Lyonette, C., & Wiggins, R. D. (2008). Money, power and spending decisions in intimate relationships. *Sociological Review*, 56, 117–143.
- Waldfogel, J., & Washbrook, E. (2011). Early years policy. *Child Development Research*, 2011(343016). <https://doi.org/10.1155/2011/343016>
- Weitzman, C. C., Roy, L., Walls, T., & Tomlin, R. (2004). More evidence for Reach Out and Read: A home-based study. *Pediatrics*, 113, 1248–1253.
- Yun, M.-S. (2005). A simple solution to the identification problem in detailed wage decompositions. *Economic Inquiry*, 43, 766–772.

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