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Time Unmasked: Illuminating the Hidden Dimensions of Economic Stratification during COVID-19 in the United States

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ABSTRACT

This paper delves into the nuanced impact of the COVID-19 pandemic on time use activities in the United States, particularly examining gender and parental status differences. Drawing on data from the 2018–2022 American Time Use Survey, the study analyzes trends in six distinct time use categories: unpaid care work, leisure, employed activities, personal care, childcare, and household activities. The research sheds light on the evolving dynamics within households during the pandemic, emphasizing the potential implications for economic stratification and societal well-being. The COVID-19 pandemic completely disrupted established time use patterns, forcing a reconsideration of 'traditional' gender roles and caregiving responsibilities in certain countries. While early studies hinted at a temporary shift toward more equitable distribution of household activities, particularly childcare, this paper scrutinizes these trends over a more extended period. Despite the short-lived increases in fathers' involvement in childcare during the pandemic, the study finds that the caregiving burden remained disproportionately on mothers and women. Notably, the analysis reveals persistent gender disparities in unpaid care work, with women and mothers spending a disproportionate amount of time on household activities, housework, and caring for children. This unequal distribution of caregiving responsibilities limits a women's ability to engage in paid work activities, contributing to economic stratification and constraining their financial resources. While some activities demonstrated slight reductions in gender gaps, the overall picture suggests that the pandemic may not bring about lasting changes in how time is allocated within households.

KEYWORDS: Time use, COVID-19, stratification

1. Introduction

Throughout U.S. history, we have witnessed important social movements striving for women's equality, as seen through accomplishments such as women's voting rights established in the 1920s, the increase in women's labor force participation beginning in the 1950s, and the 1964 Civil Rights Act, which banned discrimination on the basis of sex and race. Even still, significant gender inequalities persist in many areas,

including the gender pay gap and in time-use activities (Ferrant et al., 2014). Women, both domestically and globally, spend a disproportionate amount of time on unpaid care activities due, in part, to gendered social norms, which often steer women to 'fulfill' their domestic and reproductive 'roles'. On the other hand, women, compared to men, have lower labor-force participation rates and spend, on average, less time in paid work activities (Ferrant et al., 2014; BLS, 2023).

Data from 2022 highlight these trends in the United States where, among full-time workers, men spent an average of 8.29 h working per day whereas women spent an average of 7.80 h working per day (BLS, 2023). Men, on average, spent more time in leisure and sports activities (5.58 h per day) compared to women (4.84 h per day). On the other hand, women spent, on average, significantly more time on unpaid care activities such as household activities (136 min per day) compared to men (91 min per day), with more than double the amount of time spent on housework (49 min versus 19 min per day, respectively). Additionally, women spent more time on caring for household children (29 min per day), compared to men (14 min per day). Thus, women often face a 'double burden' of work given their time allocation to both paid and unpaid activities (Ferrant et al., 2014).

Time use allocation (i.e. how one spends time on various activities) is fundamental in shaping societal well-being and health, human development, economic empowerment, and employment opportunities (Ferrant & Thim, 2019). Factors driving the differences in time use allocation, by gender and class, include societal/cultural norms, such as gendered work in the household, and institutional arrangements, such as employment policies and sick leave (Treas & Tai, 2016). The gender gap in unpaid care work not only affects women's ability to actively participate in the labor market (i.e. work availability), but also impacts the type (i.e. quality) of employment options available to them and their financial resources (Ferrant et al., 2014). Time use allocation is also an important determining factor of economic stratification (i.e. group-based inequalities), though such gender and class-based time inequalities and their links to economic stratification largely remain neglected in economic literature, policy-making, and economic modeling. As noted by Vagni (2020), time use allocation not only causes social inequalities but also is a direct consequence of social inequalities.

Time use differences were furthered amplified during the COVID-19 global pandemic. To minimize the spread of COVID-19, there were a number of school and child care facilities that elected, or were forced due to governmental regulations, to close (Lee & Parolin, 2021). In addition, the pandemic led to intermittent closures of school operations, forcing students and parents into a new learning environment at home. This, in turn, shifted childcare burdens particularly onto mothers, who took on an even greater degree of housework and childcare duties, compared to the pre-pandemic levels (Qian & Fuller, 2020). In the Unites States, in particular, research shows that significant racial disparities were observed regarding the impact of childcare facility closures during the COVID-19 pandemic. Specifically, White families faced lower risks of encountering closed childcare facilities, compared to non-White families. This, in turn, highlights the inequalities in the gap in childcare accessibility, thus potentially impacting the disparities in the post-pandemic labor market recovery (Lee & Parolin, 2021).

In this paper, we seek to analyze the impact of COVID-19 on time use activities both within and outside of the household in the United States. In particular, we utilize data from the 2018–2022 American Time Use Survey (ATUS) to compare time

use differences by year. In particular, we examine time spent in unpaid care work (i.e. household activities), leisure time activities, employment activities (i.e. work), personal care, and childcare by gender and family composition (i.e. parental status) to assess the impact of COVID-19 on time use allocation and whether a disproportionate burden fell onto women and mothers.

2. Literature Review

Time use patterns (i.e. the allocation of time) are shaped by numerous factors, such as individual choices and preferences, sociodemographic factors (e.g. marital and parental status), societal groups and structure, culture, norms, and expectations (Vagni, 2020). Time use allocation, in turn, plays a pivotal role in shaping an individual's life, as it determines the amount of time spent on leisure, work, and family activities, to name a few, all of which have financial, health/well-being, and social implications. For example, the 'classic' tradeoff between labor and leisure (i.e. market and nonmarket) hours helps explain the consumption decisions over one's life course (Ghez & Becker, 1975; Aguiar et al., 2012). Additionally, time use decisions impact an individual's psychosocial health, as time spent in physical activity, for example, is positively associated with health outcomes (Tomczyk et al., 2021). Thus, time use allocation plays a significant role in shaping both economic and social stratification.

A number of theoretical explanations, focusing largely on factors such as money, gender, and time, provide insights into why significant inequalities exist in time use allocation (Zamberlan et al., 2021). Focusing our attention on the allocation in time spent in unpaid care activities (e.g. housework), explanations regarding the disparities in time use allocation include conventional social norms, the neoclassical model (e.g. labor-leisure tradeoffs), bargaining theory, the time availability approach, and the feminist model (Zamberlan et al., 2021; Cunningham, 2001). According to the bargaining model, time spent in unpaid care work is allocated based on the ability to negotiate (i.e. bargain) with one's domestic partner or other household members, which is determined by each individual's relative bargaining power (Lundberg & Pollak, 2007). An individual's ability to negotiate depends on one's negotiation power, determined by their opportunity cost (known as the threat point), which is often based on their market-determined wages (i.e. income), educational status, or occupational prestige (Zamberlan et al., 2021; South & Spitze, 1994).

The time availability approach argues that among couples, time devoted to tasks such as housework and childcare is based on the availability of time that each partner has, which is determined by the number of hours left in the day after time spent working (Killewald & Gough, 2010; Zamberlan et al. 2021). The feminist theory of time use allocation focuses on aspects of socialization and gender-role attitudes (i.e. social norms), which is often attributed to the 'doing gender' approach to the allocation of time (Zamberlan et al., 2021). The division of labor in the household, for example, is based not only on knowledge and skills, but also what is 'appropriate' for each gender to do, which is largely influenced by societal norms and culture (South & Spitze, 1994; Killewald & Gough, 2010). Thus, time use inequality is rooted in conventional social norms and traditional gender roles where, for example, unpaid care work is often perceived as a feminine task or within women's domain, whereas working for pay is considered to be more men's work (Cerrato & Cifre, 2018; Cunningham, 2001).

Time use is an important factor when analyzing economic, societal, and social stratification. As argued by Vagni (2020), time use allocation is not only a cause of societal inequality, but also is a consequence of social inequality. However, an often-neglected component of economic inequality is that of temporal stratification. Research indicates that inequality is temporally stratified on the basis of gender, social class, and education (Vagni, 2020). Inequality in time spent in paid work activities has, among other things, both income and wealth implications, leading to economic stratification. Those with higher incomes are, generally speaking, associated with upper-class or high socioeconomic status. Often, these individuals have the means to 'afford' more time spent on leisurely or self-improvement activities, for example.

Analyzing the allocation of time spent in paid work, leisure, and childcare in the British context reveal notable trends and historical differences (Vagni, 2020). First, Vagni notes a significant divide between social classes, observed among both men and women. Individuals from higher socioeconomic backgrounds (i.e. upper-class) are more likely to follow a 'standard' work schedule (i.e. having temporal autonomy) on weekdays and a lower likelihood of conducting paid work on the weekends (Vagni, 2020). On the other hand, working-class households tend to have more non-standard work schedules (i.e. varying shifts) among both men and women, providing less flexibility and reduces time/opportunities for career advancement, thus leading to lower income. This disparity in temporal autonomy and control over one's work schedule by social class plays a fundamental role in shaping social stratification, as more flexibility in one's employment provides for greater optimization of their productive time and access to more opportunities/career advancements, or balance work with other income-generating activities (Vagni, 2020).

Gender and cultural norms also influence time use allocation and, consequently, economic stratification. For example, when women spend a disproportionate amount of time on unpaid care work, this often comes as a cost (e.g. a reduction in time spent in paid work activities and a reduction in available resources such as income and wealth), contributing to economic disparities. Time spent in leisure activities also impacts productivity and well-being. Regarding time spent in leisure activities, women and men, generally speaking, have different experiences (Vagni, 2020). For mothers, time spent in leisure time is often disrupted, which limits their ability to unwind and rest (Mattingly & Blanchi, 2003). Furthermore, mothers, compared to fathers, typically dedicate more time to multitasking in areas such as household chores and childcare (Offer & Schneider, 2011). When considering educational attainment, those with less education spend more time in leisure activities compared to those with more education, although this leisure time might not contribute to the attainment of cultural and human capital (Bittman & Wajcman, 2000; Aguiar & Hurst, 2007; Vagni, 2020). Another stratified time use activity is that of childcare, where the more educated allocate, on average, more time on childcare activities, which may have long-term consequences (e.g. Altintas, 2016; Vagni, 2020). As such, the allocation of time use is dictated, in part, by gender, class, and education.

The traditional gender 'roles' within the household and time spent on various activities throughout the day were disrupted as a direct consequence of the COVID-19 pandemic, resulting from labor market shocks (Zamberlan et al., 2021). In the early stages of the COVID-19 pandemic, many countries, including the United States, imposed various lockdown or stay-at-home measures for a certain period of time. In

order to slow the spread, stay-at-home orders were first implemented in California, on March 19, 2020), with other states following suite after (Warner & Zhang, 2021). Between March and April (of 2020), the Bureau of Labor Statistics (BLS) estimated that there was a 13.6% decrease in employment, though employment measures began to increase again by May/June (of 2020) (BLS, 2023). The lockdown and stay-at-home measures enacted also significantly impacted the division of labor within the household. Household activities that were previously outsourced to the market (e.g. housework or childcare) were no longer feasible to outsource (Hupkau & Petrongolo, 2020). Due to the observed labor market shocks and travel restraints (i.e. 'nowhere' to go), time spent on unpaid care work (e.g. housework and childcare), with certain exemptions (i.e. which employment sector one was in), increased. Since gender, among heterosexual couples, is the primary determinant of unpaid care work, if one were to follow said gender conventions, this increase in unpaid care work may be shouldered by women (Petts et al., 2020). However, it should be noted that research regarding the impact of COVID-19 on labor market shocks is still in its infancy and the findings, to date, are mixed.

A number of early studies have indicated that the COVID-19 pandemic had a significant impact on the gender division of unpaid labor, though there are no insights, naturally, as to whether these changes will translate to long-run shifts (Zamberlan et al., 2021). Research indicates that given the more flexible work arrangements (e.g. work from home, when possible), which are largely enjoyed by highly educated individuals, may promote greater gender equality, as fathers increased their time spent on childcare activities (Alon et al., 2020; Hupkau & Petrongolo, 2020). For example, in Italy, Mangiavacchi et al. (2021) and Del Boca et al. (2020) found a more equal distribution in childcare, but not in housework as women increased time spent on household activities while among men, it depended on their partners' work status (Del Boca et al., 2020). In the UK, both men and women who lost working hours spent more time on housework and childcare (Zamberlan et al., 2021). However, time spent in childcare became more equally distributed than time spent in housework following the pandemic in the UK, despite unpaid labor still being largely viewed as a female responsibility. When men are considered the family 'breadwinner', even with a reduction in working hours, women spend a large share on housework and childcare (Zamberlan et al., 2021). In households where women are considered the 'breadwinner', women who saw a reduction in time spent working increased their time spent in unpaid care work. Similar to other countries, time spent on childcare in the UK is more equally shared between couples, with fathers increasing their time spent on childcare following a reduction in time spent working (Zamberlan et al., 2021). In Canada, Shafer et al. (2020), observed a more balanced division of labor in childcare at the start of the pandemic. However, Farr'e et al. (2020) demonstrated an increase in gender inequality observed in both paid and unpaid work in Spain.

Utilizing data from the United States, Carlson and Petts (2022) found that the early months of the COVID-19 pandemic brought about a more gender-equal division of labor regarding time spent in unpaid work (housework and childcare) among US couples who had at least one child, which stemmed from fathers spending more time at home, thus increasing their exposure to domestic work early in the pandemic. However, Carlson and Petts (2022) note that these observed changes within the gender-division of housework were likely short-lived and also had marginal impacts. Specifically, their findings show that early in the pandemic (April,

2020), there were significant shifts in time spent in unpaid care work, as more parents were working from home, were unemployed, or were not working full-time jobs. During this time, fathers who spent less time in paid work activities, who worked from home, or shifted to part-time work increased their time spent on domestic labor. Thus, the authors note that during times of crises, as observed by the COVID-19 pandemic, typical gendered conventions may be 'paused' as a result of the challenges that it induced. However, the authors note that by November (2020), there was already a 'reversion back toward pre-pandemic levels' regarding the division of labor within the household (Carlson & Petts, 2022, p. 2399). Their findings show that time spent in housework and childcare was 2% higher for fathers during the pandemic, compared to pre-pandemic levels. The authors note, however, that even though there was a slight improvement in the gender imbalance in housework, observed among those with children, given the magnitude of the change, the gendered-division of household labor remains deeply entrenched (Carlson & Petts, 2022). Similar observations were noted by Lyttelton et al. (2023) for the United States. Utilizing data from the American Time Use Survey, Lyttelton et al. found that time spent on housework increased among parents, and in particular fathers, during the pandemic. Their findings show that fathers who worked remotely increased their time spent on housework by 30 more minutes (per day), while mothers increased their time spent on housework by 16 more minutes (per day), thus decreasing the gender gap in the division of housework by 13 min (Lyttelton et al., 2023). However, as their study analyzed data up until 2020, whether this change in the division of labor were sustained could not be deciphered.

More recent studies have coined the term 'shecession' to describe the COVID-19 economic recession to highlight the disproportionate effects observed among women, especially among working mothers with young children (Scarpetta et al., 2021). Data from the Organization for Economic Co-operation and Development (OECD) countries reveal that with the lockdown measures in place, mothers saw an increase in time spent on unpaid care work, which, in turn, led to labor market penalties (i.e. were more likely become unemployed) and increased stress (Scarpetta et al., 2021). These observed gender gaps in unpaid care were, on average, most pronounced in households where the male remained employed while the mother was not employed. However, even if the mother remained employed, it did little to alleviate the inequality observed in unpaid care work (Scarpetta et al., 2021).

In this paper, we seek to contribute to the discussion on time use changes as a result of COVID-19. In particular, we analyze observed time use trends by gender and parental status between 2018 and 2022 for various time use activities. For our analysis, we utilize a standard household production model, as our analysis is not limited to only households where domestic partnerships are present. In particular, we assume that time spent in various activities is a function of a number of demographic and economic factors, as noted below.

3. Data & Methodology

3.1. Data

Data for this study come from the federally-administered American Time Use Survey Extract Builder (ATUS-X) for years 2018–2022. ATUS, sponsored by the Bureau of

Labor Statistics, collects time diary data based on all activities completed on the diary day from a representative sample in the United States. ATUS respondents are randomly drawn from households who have completed the Current Population Survey (CPS), among individuals aged 15 or older. Data collected on diary days are distributed evenly across weeks throughout the year and 10% to each weekday, 25% to Saturdays, and 25% to Sundays (Flood et al., 2023). In addition to providing detailed information on time use activities, data is collected on demographic, personal, and household characteristics, including information on age, occupation, gender, marital status, household composition, race, ethnicity, and income (Flood et al., 2023).

We restrict the data to years 2018–2022 to account for pre-COVID-19 and COVID-19 time use trends. This approach allows us to analyze two full years of data (i.e. 2018 and 2019) prior to the start of COVID-19 in 2020 and subsequently analyze time use differences during COVID-19 (i.e. 2020, 2021, and 2022). Critically, it should be noted that annual estimates cannot be completed for ATUS 2020, as data collection was suspended between March 18 and May 9, 2020. Thus, a limitation of this study is that for year 2020, only partial-year estimates can be produced as for that year the time use data only represents a total of 313 days, rather than a full year of data (Flood et al., 2023).

Given the nature of survey data (i.e. probability of selection), over-sampling of weekend days, and differing response rates, appropriate statistical weights were applied throughout the analyses (Flood et al., 2023). Due to the partial year estimates provided for year 2020, separate weights were applied for that year (i.e. WT20 from ATUS), in contrast to the weight applied to years 2018, 2019, 2021, and 2022 (i.e. WT06 from ATUS). Due to the lack of consistent survey weights across the spectrum of years analyzed, separate weighted regression analyses (by year) were conducted.

The sample was restricted to individuals aged 18–64, inclusive, which resulted in 14,076 observations being dropped. We elected to restrict our sample to those ages to capture the working-age population. Additional exclusions implemented included individuals who did not specify the type of housing unit, those who did not have permanent housing, those living in student quarters, those who are retired, and those with missing data (1,817 observations dropped). Furthermore, to address potential outliers, we excluded those who reported spending more than within three standard deviations from the mean spent in each time use activity (2,693 observations dropped). The resultant sample size was 26,447 observations.

3.2. Variables

Given the time use inequalities observed in both paid and unpaid activities, the analysis focuses on a total of five different time use activities domains: (paid) work activities, leisure and sports, personal care, caring for children, and household activities. A brief description of each time use category is provided in Table 1. In addition to these domains, specific household activities (i.e. time spent in housework and time spent in food preparation) were also analyzed, separately, in this analysis. Demographic variables included in the study include age (and age-squared) of respondent, sex, citizen status, race/ethnicity, marital status, educational attainment,

employment status, household tenure (i.e. ownership), family income, household type, region, number of children, age of youngest child, day of diary. A description of each covariate utilized in the model is provided in Table 1, along with the reference category for each categorical variable.

Thus, the conceptual framework utilized for the regression analyses conducted was:
$time\ use\ activity = \beta_0 + \beta_1(Age) + \beta_2(Age\ squared) + \beta_3(Female) + \beta_4(North) + \beta_5(West) + \beta_6(Midwest) + \beta_7(Black\ non\text{-}Hispanic) + \beta_8(Asian\ non\text{-}Hispanic) + \beta_9(Hispanic) + \beta_{10}(High\ school) + \beta_{11}(Some\ college) + \beta_{12}(Bachelor's) + \beta_{13}(Master's\ or\ above) + \beta_{14}(Not\ married) + \beta_{15}(Never\ married) + \beta_{16}(Citizen) + \beta_{17}(Unemployed) + \beta_{18}(Not\ in\ labor) + \beta_{19}(Tenure) + \beta_{20}(Housetype) + \beta_{21}(Income) + \beta_{22}(Weekend) + \beta_{23}(Holiday) + \beta_{24}(One\ child) + \beta_{25}(Two\ children) + \beta_{26}(Three\ children) + \beta_{27}(Four\ or\ more\ children) + \beta_{28}(Child\ aged\ 0\text{–}5) + \beta_{29}(Child\ aged\ 6\text{–}12) + \varepsilon$

3.3. Statistical Analysis

Separate ordinary least squares (OLS) regression analyses were conducted for each time use activity, while controlling for all relevant covariates in each regression. While the time use activities in unpaid activities controlled for employment status, the regression analyses conducted for time spent in work activities was restricted to those who were classified as employed. The regression analyses were conducted in

Table 1. Description of variables utilized in the model.

Time use variables	Description
Paid work activities	Includes time spent on tasks related to one's employment, in income-generating activities, and looking for jobs and interviewing
Leisure and sports	Includes a broad spectrum of social and recreational activities, such as socializing/communicating, attending gatherings/parties, leisure activities (e.g. relaxing, watching television), and sports/exercise
Personal care	Includes time dedicated to fundamental self-care activities (e.g. sleeping and grooming).
Caring for children	Includes activities associated with caring or helping any child (or adult) in the household
Household activities	Includes the routine tasks to maintain households (e.g. cleaning, cooking, renovations, maintenance).
Covariates	**Description**
Age	Measured continuously for those between the ages of 18–64.
Age-squared	Age*age.
Sex	Female or male.
Citizenship status	Yes (reference) or no.
Race/ethnicity	White non-Hispanic (reference), Black non-Hispanic, Asian non-Hispanic, Hispanic.
Marital status	Married (reference), not married (i.e. widowed, divorced, or separated), and not married (i.e. single).
Educational attainment	High school degree (reference), high school degree, some college, bachelor's degree, or master's degree or higher.
Employment status	Employed (reference), unemployed, or not in the labor force.
Household tenure	Owned (reference) or rented.
Family income	Less than $59,999 (reference) and greater than $60,000.
Household type	House, apartment, or flat (reference) or other.
Region	South (reference), North, Midwest, and West.
Number of children	No children (reference), 1 child, 2 children, 3 children, or 4 or more children
Age of youngest child	Ages 0–5, 6–12, and 13–17 (reference).
Diary day	Weekday (reference) or weekend
Holiday	Yes (reference or no.

a twofold process. First, weighted regression analyses were conducted to observe the gendered-differences in time use activities by year (Table 4). Next, weighted regression analyses were limited to parental status in order to analyze the differences in time use activity observed between mothers and fathers (Table 5).

Statistical analyses were conducted utilizing Stata/MP Version 17.

4. Results

4.1. Descriptive Statistics

Given the different weights associated with each year, we elect to discuss the average weighted descriptive statistics, across the selected years, as provided in Table 2. The average age of participants is 40 years, with a nearly equal representation of female and male respondents. The majority of respondents are classified as White non-Hispanic (62%), followed by Hispanics (20%), Black non-Hispanic (12%), and Asian non-Hispanic (7%). Just under half of the respondents (41%) have children, the average number of children is 0.75, and 21% of the sample are mothers and 20% are fathers. Among those with children, 40% have children between the ages 0–5, 35% have children between the ages of 6 to 12, and 25% have children between the ages of 13 to 17. Over half of the sample are married (51%), 12% are widowed, divorced, or separated, while 36% have never been married. The majority of the sample has obtained a high school degree (27%), 9% had less than a high school degree, 25% had some college (associate degree or never finished their undergraduate degree), 24% reported to hold a bachelor's degree, and 15% obtained a master's degree or higher. The majority of respondents are U.S. citizens (89%), are employed (81%), live in a house, apartment, or flat (96%), own their home (68%), and have a family income over $60,000 per year (61%), and live in the South (38%). Lastly, 28% of the respondents conducted these diary entries on a weekend and fewer than 2% on a holiday.

Table 3 provides the mean time, measured as minutes per day, spent by the overall sample and by gender (i.e. women and men, respectively) in the following time use activities: household activities, housework, food preparation, personal care, leisure and sports, working, and caring for children. Focusing on the gendered-differences in time use activities, the majority of time is spent, on average, on personal care activities for both men (562 min/day) and women (568 min/day). Women report spending less time in paid work activities (258 min/day), compared to men (327 min/day), and spend less time in leisure activities (261 min/day), compared to their male counterparts (299 min/day). However, women, on average, spend more time on unpaid care activities compared to men. Women spent an average of 108 min/day on household activities, compared to 71 min/day for men. Women spent an average of 36 min/day on housework, while for men it was 14 min/day; women spent 43 min/day on food preparation, compared to 22 min/day for men. Lastly, women spent, on average, 37 min/day on caring for children, while it was 21 min/day for men.

Observing trends in time use activities across the years (Table 3), we see that for women, there was a slight increase in time spent in household activities and leisure/sports activities in 2020 and 2021. Time spent in housework, food preparation, and caring for children remained relatively stable across the years. Time spent working decreased in 2020, though increased in years past. Similar trends are observed

Table 2. Weighted descriptive statistics for American Time Use Survey by year & average of years.

	2018($n = 5{,}791$)	**2019**($n = 5{,}714$)	**2020**($n = 5{,}105$)	**2021**($n = 5{,}249$)	**2022**($n = 4{,}588$)	**Average** ($n = 5{,}289$)
Gender						
Female	51.18%	50.95%	48.84%	48.68%	48.57%	49.64%
Male	48.82%	49.05%	51.16%	51.32%	51.43%	50.36%
Race/ethnicity						
White non-Hispanic	62.63%	63.71%	62.34%	60.57%	59.69%	61.79%
Black non-Hispanic	12.15%	11.80%	12.04%	12.42%	12.08%	12.10%
Asian non-Hispanic	6.46%	5.52%	6.35%	6.71%	7.65%	6.54%
Hispanic	18.76%	18.97%	19.26%	20.30%	20.58%	19.57%
Household composition						
Have children (1 = yes)	41.20%	41.05%	40.80%	40.39%	40.20%	40.73%
Number of children (mean)	0.76	0.75	0.75	0.74	0.75	0.75
Mother (% of women)	20.91%	21.22%	21.22%	20.53%	20.56%	20.89%
Father (% of men)	20.29%	19.83%	19.83%	19.86%	19.63%	19.89%
Own home	68.49%	67.24%	67.24%	67.42%	68.08%	67.69%
Housetype (1 = yes)	96.60%	95.72%	95.27%	96.49%	96.68%	96.15%
Age groupings of children						
Aged 0–5	39.62%	39.94%	40.82%	41.63%	39.18%	40.24%
Aged 6–12	35.49%	35.35%	35.54%	33.48%	35.61%	35.09%
Aged 13–17	24.89%	24.71%	23.63%	24.89%	25.22%	24.67%
Education						
Less than high school degree	8.56%	9.39%	8.78%	8.47%	8.44%	8.73%
High school degree	28.01%	26.91%	27.10%	27.39%	27.43%	27.37%
Some college	26.62%	25.98%	24.59%	24.13%	22.92%	24.85%
Bachelor's degree	22.85%	23.64%	25.23%	25.12%	25.01%	24.37%
Master's degree or higher	13.96%	14.08%	14.30%	14.88%	16.20%	14.68%
Marital status						
Married	51.75%	51.30%	51.16%	51.11%	50.59%	51.58%
Not married	11.92%	13.25%	12.56%	12.18%	12.45%	12.47%
Never married	36.33%	35.45%	36.28%	36.72%	36.97%	36.35%
Citizen (yes)	89.78%	89.10%	88.69%	89.48%	87.86%	88.98%
Employment status						
Employed	81.82%	82.26%	79.07%	80.49%	82.44%	81.22%
Unemployed	3.91%	3.90%	5.15%	3.45%	3.18%	3.92%
Not in labor force	14.26%	13.85%	15.77%	16.05%	14.38%	14.86%

(*Continued*)

Table 2. Continued.

	2018($n = 5{,}791$)	**2019**($n = 5{,}714$)	**2020**($n = 5{,}105$)	**2021**($n = 5{,}249$)	**2022**($n = 4{,}588$)	**Average** ($n = 5{,}289$)
Region						
North	17.14%	17.40%	17.39%	17.73%	16.27%	17.19%
South	37.50%	37.52%	37.41%	37.01%	38.95%	37.68%
Midwest	23.54%	23.46%	23.08%	22.05%	21.67%	22.76%
West	21.82%	21.61%	22.13%	23.21%	23.11%	22.38%
Family income						
Less than $59,999	41.72%	41.57%	37.41%	39.64%	35.51%	39.17%
Greater than $60,000	58.28%	58.43%	62.59%	60.36%	64.49%	60.83%
Age (mean)	40.08	40.04	40.16	40.15	40.25	40.13
Diary day						
Weekend (yes)	27.51%	27.71%	27.02%	27.40%	28%	27.53%
Holiday (yes)	1.76%	1.87%	1.71%	1.49%	1.57%	1.68%

Table 3. Weighted mean time spent in activities (overall, women, and men).

	2018	2019	2020	2021	2022	Average
Time use activities, overall[a]						
Household activities	85	86	92	92	88	89
Housework	25	23	24	25	25	24
Food preparation	30	32	33	33	33	32
Personal care	566	570	578	573	579	573
Leisure and sports	279	275	294	279	275	280
Working	298	299	279	295	295	293
Caring for children	29	30	28	28	28	29
Time use activities, women[a]						
Household activities	106	105	108	112	107	108
Housework	38	33	35	36	36	36
Food preparation	41	42	44	43	43	43
Personal care	576	585	589	582	596	568
Leisure and sports	257	257	267	264	259	261
Working	266	257	251	254	260	258
Caring for children	38	37	37	36	37	37
Time use activities, men[a]						
Household activities	64	68	76	74	71	71
Housework	13	14	14	14	15	14
Food preparation	20	22	22	24	23	22
Personal care	556	557	568	564	564	562
Leisure and sports	301	292	321	292	290	299
Working	328	339	306	333	329	327
Caring for children	21	22	19	21	21	21

[a]Time use activities are measured as mean minutes per day for each category, rounded up to nearest whole minute.

among men, as time spent in household activities increased, on average, in 2020 and 2021 (compared to years prior), though remained relatively flat for time spent in housework, food preparation, and caring for children. Time spent in leisure and sports activities increased in 2020, while time spent working decreased in 2020, picking back up in later years.

4.2. Weighted Regression Analyses

Results of the weighted OLS regression analyses for the gendered-differences (i.e. highlighting just the differences for men and women) in time use, by activity and by year, are provided in Table 4. All regression analyses included the socioeconomic and demographic variables discussed and provided in Table 1. Standard robustness checks were performed for all regression analyses conducted. While there were no issues with multicollinearity (as measured by the variation inflation factors), heteroskedasticity was present in all our regression analyses conducted. Thus, results display the robust standard errors.

Given the complexity of our analyses, we have provided mean time differences, by gender, in Tables 4 and 5 and discuss the findings in detail below. That is, we highlight the coefficient of 'female' variable in our analysis and either add (or subtract, pending the sign) the value of the coefficient to the intercept term (i.e. the mean time spent on said activity for males). Full results for the weighted regression

Table 4. Weighted OLS regression analyses results—gendered-differences in time use activities (by year).[a]

	2018	2019	2020	2021	2022
Household activities (all)					
Male	39***	29***	50***	83***	65***
Female	79***	62***	78***	118***	95***
Housework, specifically					
Male	13	10	5	30***	24***
Female	38***	28***	25***	50***	44***
Food preparation					
Male	10	18**	18**	26***	20*
Female	30***	36***	39***	44***	38***
Personal care					
Male	582***	595***	594***	542***	592***
Female	602***	620***	612***	559***	623***
Leisure and sports					
Male	246***	213***	284***	239***	262***
Female	194***	169***	217***	201***	225***
Working[b]					
Male	448***	505***	377***	477***	443***
Female	400***	441***	352***	418***	396***

[a]Given the length of the tables, full regression analyses results are presented in Appendix A. All results are measured as average number of minutes spent on each activity per day, rounded up to the nearest whole number.
[b]Restricted regression analyses to include only those who are considered employed.
***Statistically significant at the 1% level.
**Statistically significant at the 5% level.
*Statistically significant at the 10% level.

Table 5. Weighted regression analyses results—gendered-differences in time use activities by parental status (by year).[a]

	2018	2019	2020	2021	2022
Household activities (all)					
Fathers	21	50*	73**	51	90**
Mothers	67***	94***	116***	101***	126***
Housework					
Fathers	14	19	20	27	16
Mothers	43***	44***	45***	53***	39***
Food preparation					
Fathers	13	20	22	6	42*
Mothers	43***	46***	52***	37***	69***
Personal care					
Fathers	556***	566***	538***	542***	576***
Mothers	566	590***	553*	559**	602***
Leisure and sports					
Fathers	218***	232***	277***	197***	245***
Mothers	174***	175***	213***	165***	220*
Working					
Fathers	478***	455***	376***	509***	380***
Mothers	419***	369***	323***	432***	314***
Caring for children					
Fathers	28*	20	44*	37**	16
Mothers	51***	41***	70***	60***	32***

[a]Full regression analyses results are provided in Appendix B, Tables B1–B7. All results are measured as average number of minutes spent on each activity per day, rounded up to the nearest whole number.
***Statistically significant at the 1% level.
**Statistically significant at the 5% level.
*Statistically significant at the 10% level.

analyses (and thus of each coefficient) are provided in Appendix A (Tables A1–A6) for the overall sample and in Appendix B (Tables B1–B6) when concentrating on parents, only. Focusing our attention on paid work activities, we see that men spent, on average, more time on work-related activities compared to women across all years. In 2018, men spent an average of 448 min per day on work-related activities, 505 min in 2019, 377 min in 2020, 477 min in 2021, and 443 min in 2022. Comparatively, women spent, on average, 400 min on work-related activities in 2018, 441 min in 2019, 352 min in 2020, 418 min in 2021, and 396 min in 2022.

Analyzing time spent on unproductive work (i.e. personal care and leisure time), we see that women spend, on average, more time on personal care activities compared to men, while men, on average, spend more time in leisure and sports activities than women. Among men, the average time spent in personal care activities was 582 min in 2018, 595 min in 2019, 594 min in 2020, 542 min in 2021, and 592 min in 2022. For women, these figures were 602, 620, 612, 559, and 623 min per day, respectively. Regarding time spent on leisure activities, in 2018, men and women spent an average of 246 and 194 min per day on leisure activities, respectively; this decreased to 213 and 169 min per day, respectively, in 2019. In 2020, time spent in leisure activities increased for both men and women (284 and 217 min per day, respectively), and decreased once again by 2021 and 2022, with 239 and 201 min spent on leisure activities for men and women in 2021, respectively, and 262 and 225 min for men and women in 2022, respectively.

Lastly, with regards to unpaid care work (i.e. household activities), we see that women spend, on average, significantly more time on household activities compared to their male counterparts. Men spent, on average, 39 min per day on all household activities in 2018, 29 min in 2019, 50 min in 2020, 83 min in 2021, and 65 min in 2022. Comparatively, women spent, on average, 79 min per day in 2018, 62 min in 2019, 78 min in 2020, 118 min in 2021, and 95 min in 2022. Focusing specifically on housework, we see that in 2018 men spent 13 min on housework, 10 min in 2019, 5 min in 2020[1], 30 min in 2021, and 24 min in 2022; comparatively, these figures were women were: 38 min (2018), 28 min (2019), 25 min (2020), 50 min (2021), and 44 min (2022). Lastly, time spent in food preparation for men was 10 min (2018)[2], 18 min (2019), 18 min (2020), 26 min (2021), and 20 min (2022); for women, it was 30 min (2018), 36 min (2019), 39 min (2020), 44 min (2021), and 38 min (2022).

Next, we focus our attention on parental status and run separate weighted OLS analyses for mothers and fathers (Table 5). Similar patterns as those observed in the gender differences are observed when focusing on parental status. On average, we find that fathers spend more time on work-related activities compared to mothers. Among fathers, the average time spent on work-related activities was 478 min per day in 2018, 455 min in 2019, 376 min in 2020, 509 min in 2021, and 380 min in 2022. Mothers, on average, spent 419, 369, 323, 432, and 314 min, respectively. Similar to the gender comparison, time spent in personal care activities is higher, on average, among mothers than among fathers. Among fathers, the average time spent on

[1]Note, the results for time spent on housework for men in 2018, 2019, and 2020 were statistically insignificant.

[2] Note, the results for time spent on food preparation for men in 2018 was statistically insignificant.

personal care activities was 556 min per day in 2018, 566 min in 2019, 538 min in 2020, 542 min in 2021, and 576 min in 2022. For mothers, these figures were 566, 590, 553, 559, and 602 min each day, respectively. Similar to the gender comparison, we see that fathers, on average, spend more time on leisure activities than mothers. In 2018, fathers and mothers spent an average of 218 and 174 min per day on leisure activities, respectively. In 2019, they were 232 and 175 min, respectively; in 2020, they were 277 and 213 min, respectively; in 2021, they were 197 and 165 min, respectively; and in 2022, they were 245 and 220 min, respectively.

Lastly, analyzing time spent in unpaid care work, we observe mothers spend a disproportionate amount of time on household activities, housework, food preparation, and caring for children, compared to fathers. For all household activities, fathers spent, on average, 21 min per day in 2018[3], 50 min in 2019, 73 min in 2020, 51 min in 2021, and 90 min in 2022. In comparison, mothers spent, on average, 67 min per day in 2018, 94 min in 2019, 116 min in 2020, 101 min in 2021, and 126 min in 2022. A similar pattern is observed when specifically analyzing time spent on housework with mothers spending, on average, more than double the amount of time on housework compared to fathers. However, time spent no statistically significant results were observed for fathers for time spent on housework or food preparation (with the exception of 2022 for food preparation). Mothers time spent on housework was 43 min in 2018, 44 min in 2019, 45 min in 2020, 53 min in 2021, and 39 min in 2022. For mothers, time spent on food preparation was 43 min in 2019, 46 min in 2019, 52 min in 2020, 37 min in 2021, and 69 min in 2022. Mothers also consistently spent about twice as much time caring for children compared to fathers. In 2018, fathers spent 28 min and mothers spent 51 min; in 2019, it was 20 min and 41 min, respectively; in 2020 it was 44 min and 70 min, respectively; in 2021, it was 37 min and 60 min, respectively; in 2022, it was 16 min and 32 min, respectively.[4]

4.3. Yearly Percent Changes in Time Use Activities

Next, we highlight the percent changes in mean time spent on activities, by year, in Table 6. Specifically, we calculate the increase (or decrease) in time spent in each activity from the prior year. Analyzing the gendered-differences, time spent in work-related activities decreased significantly for both men and women between 2019 and 2020, with a 25% reduction observed among men and a 20% reduction among women. However, the 'bounce back' in time spent on work-related activities (i.e. in 2021, compared to 2020) was much higher for men (27% increase), compared to women (19% increase). In 2022, time spent in work-related activities decreased by 7% for men and decreased by 5% for women, compared to 2021. Among parents, we observed that there was a 17% reduction in time spent working for fathers in 2020 (compared to 2019), and a 12% reduction for women. Interestingly, the 'bounce back' in time spent working increased by similar magnitudes for fathers (35%) and

[3]Note, the results for time spent on household activities for fathers in 2018 and 2021 were statistically insignificant.

[4]Note, the results for time spent on caring for children for fathers were statistically insignificant for 2019 and 2022.

Table 6. Yearly percentage changes in observed time use activities by gender & parental status.

Gendered-differences	2019 (compared to 2018)	2020 (compared to 2019)	2021 (compared to 2020)	2022 (compared to 2021)
Household activities				
Male	−26%	72%	66%	−22%
Female	−22%	26%	51%	−19%
Housework				
Male	--	--	--	−20%
Female	−26%	−11%	100%	−12%
Food preparation				
Male	--	0%	+44%	−23%
Female	20%	8%	+13%	−14%
Personal care				
Male	2%	-<1%	−9%	9%
Female	3%	−1%	−9%	11%
Leisure and sports				
Male	−13%	33%	−16%	10%
Female	−13%	28%	−7%	12%
Working				
Male	13%	−25%	27%	−7%
Female	10%	−20%	19%	−5%
By parental status	2019 (compared to 2018)	2020 (compared to 2019)	2021 (compared to 2020)	2022 (compared to 2021)
Household activities				
Fathers	--	46%	--	--
Mothers	40%	23%	−13%	−25%
Housework				
Fathers	--	--	--	--
Mothers	2%	2%	18%	−26%
Food preparation				
Fathers	--	--	--	--
Mothers	7%	13%	−29%	86%
Personal care				
Fathers	2%	−5%	1%	6%
Mothers	--	−6%	1%	8%
Leisure and sports				
Fathers	6%	19%	−29%	24%
Mothers	<1%	22%	−23%	33%
Working				
Fathers	−5%	−17%	35%	−25%
Mothers	−12%	−12%	34%	−27%
Caring for children				
Fathers	--	--	−16%	--
Mothers	−20%	71%	14%	−36%

mothers (34%) in 2021. In 2022, time spent in work-related activities decreased slightly more among mothers (27%), compared to fathers (25%).

Small changes in time spent in personal care activities were observed between 2018 and 2020; however, between 2020 and 2021, time spent in personal care activities decreased by 9% for both men and women. However, time spent in personal care activities bounced back in 2022, with a 9% increase for men and an 11% increase for women (compared to 2021). Among parents, we observed that time spent in personal care activities decreased by 5% for fathers and 6% for mothers in

Table 7. Egalitarian gap in time use activities by year, comparing women to men.

Gender gap (female versus male)	2018	2019	2020	2021	2022
Household activities	40	33	28	35	30
Housework	25	18	20	20	20
Food preparation	20	18	21	18	18
Personal care	20	25	18	17	31
Leisure and sports	−52	−44	−67	−38	−37
Working	−48	−64	−25	−59	−47
Parental status gap (mother versus fathers)	**2018**	**2019**	**2020**	**2021**	**2022**
Household activities	46	44	43	50	36
Housework	29	25	25	26	23
Food preparation	30	26	30	31	27
Personal care	10	24	15	17	26
Leisure and sports	−44	−57	−64	−32	−25
Working	−59	−86	−53	−77	−66
Caring for children	23	21	26	23	16

2020 (compared to 2019). A small increase (both 1%) was observed in time spent in personal care activities in 2021, though it increased further (6% for fathers and 8% for mothers) in 2022. During the COVID-19 pandemic, time spent in leisure and sports activities increased significantly for both men and fathers (33% and 19%, respectively) and women and mothers (28% and 22%, respectively). In 2021, time spent in leisure and sports activities saw a 16% decrease for men and 7% decrease for women (29% decrease for fathers and 23% decrease for mothers). In 2022, time spent in leisure and sport activities increased once again, 10% for men (24% for fathers) and 12% for women (33%).

Time spent in household activities (all) increased by 72% for men (46% for fathers) in 2020 (compared to 2019) and by 26% for women (23% for mothers); it further increased by 66% for men and 51% for women in 2021 (compared to 2020); for mothers, time spent in household activities decreased by 13%. Compared to 2021, time spent in household activities decreased by 22% for men and 19% for women (and by 25% for mothers). Statistically insignificant results were observed for men (and fathers) for most years with regards to time spent on housework; for women (and mothers, specifically), time spent on housework was 11% lower for women in 2020 (compared to 2019), but was 100% higher in 2021 (compared to 2020), and 12% lower in 2022 (compared to 2021); for mothers, time spent in housework was 18% higher in 2020 (compared to 2019) and 26% lower in 2022 (compared to 2021).

With regards to time spent in food preparation, for men it increased by 44% in 2021 (compared to 2020) and decreased by 23% in 2022 (compared to 2021). For women, time spent in food preparation increased by 8% in 2020, by 13% in 2021, and decreased by 14% in 2022; for mothers, it increased by 13% in 2020, decreased by 29% in 2021, and increased by 86% in 2022. Time spent on caring for children saw no statistically significant changes among fathers, with the exception of 2021 (which saw a 16% decrease compared to 2020). Among mothers, we observed that time spent in caring for children increased by 71% in 2020, by 14% in 2021, and decreased by 36% in 2022.

4.4. Changes to the 'Egalitarian' Gap by Year

Lastly, we analyze whether there were changes observed with regards to closing the 'egalitarian' gap (i.e. whether the observed gender gaps in the time use activities became smaller over the years). All results are presented in Table 7. In 2019, the gender gap in time spent on leisure and sports was −44 min (i.e. men spent an average of 44 more minutes per day on leisure time activities, compared to women), in 2020, the gap widened to −67 min, but decreased back down to −38 and −37 in 2021 and 2022, respectively. Regarding time spent in personal care activities, we see that the gender gap has widened between 2019 and 2022, with a 25-minute gap observed in 2019 (i.e. women spending 25 more minutes, per day, on personal activities, compared to men), which decreased to 18 min (in 2020) and 17 min (in 2021), before increasing to 31 min (in 2022). The gap in mean time differences in work-related activities has narrowed between men and women over the years, decreasing from 64 min (in 2019), 25 min (in 2020), 59 min (in 2021), and 47 min (in 2022). Regarding unpaid care activities, we observed that in 2019, women spent 33 more minutes on household activities per day, compared to men; this gap narrowed for women in 2020 to 28 min, though increased to 35 min in 2021 and 30 min in 2022. The gender gap in spent in housework, specifically, remained relatively stabled throughout the years, with an 18-minute gap in 2019, and a 20-minute gap observed for years 2020–2022. Similarly, the gender gap in time spent in food preparation also remained relatively stable, with 18 min observed in 2019, 21 min in 2020, and 18 min for both 2021 and 2022.

Analyzing the egalitarian gap between mothers and fathers, specifically, we observe similar trends. Mothers, on average, spent 57 fewer minutes on leisure/sports activities, compared to fathers, in 2019; this increased to 64 fewer minutes in 2020, and then decreased to 32 and 25 fewer minutes in 2021 and 2022, respectively. The parent gap in time spent in work-related activities changed from 86 min in 20219, to 53 min in 2020, to 77 min in 2021, and 66 min in 2022. Mothers spent 24 more minutes on personal care activities in 2019, which decreased to 15 min in 2020, 17 min in 2021, and 26 min in 2022. Compared to fathers, mothers spent more time in all unpaid care activities analyzed. Mothers spent 44 more minutes on all household activities in 2019, 43 more minutes in 2020, 50 more minutes in 2021, and 36 more minutes in 2022. Specifically looking into time spent on housework, we observe that mothers spent 25 more minutes in housework than fathers in 2019 and 2020, 26 more minutes in 2021, and 23 more minutes in 2022. Mothers spent 26 more minutes on time spent on food preparation (compared to fathers) in 2019, 30 more minutes in 2020, 31 more minutes in 2021, and 27 more minutes in 2022. Lastly, mothers spent 21 more minutes caring for children in 2019, 26 more minutes in 2020, 23 more minutes in 2021, and 16 more minutes in 2022, compared to fathers.

5. Discussion

Similar to other studies (e.g. Zamberlan et al., 2021), the results of this analysis show that, after for controlling for relevant covariates, the COVID-19 pandemic significantly the allocation of time in a number of activities, especially for women and mothers.

Time spent in personal care activities decreased significantly in 2021, for both men (and fathers) and women (and mothers). In 2022, time spent on personal care activities was similar to those observed in 2019. Significant changes in the allocation of time were observed initially in 2020 (and in some cases beyond that) in the areas of household activities, housework, food preparation, leisure and sports, and work-related activities. One of the potential explanations regarding this significant change in time spent on work-related activity may be the increase in remote work as a result of the pandemic which, in turn, altered our 'traditional' work hours, especially when it may blur the boundaries between professional (i.e. work-related activities) and personal time (e.g. leisure time). As such, the caveat remains regarding the more egalitarian results for time spent in work-related activities as not only did the gender gap narrow, but there were more significant reductions observed across the years (as measured as the percentage of their day) for men and fathers. Regardless of time use changes observed across this time period, women, on average, still spend a disproportionate amount of time on household activities, housework, food preparation, personal care activities, and childcare activities (analyzed only by parental status). On the other hand, men remained spending more time on work-related activities and leisure activities, throughout the time period observed. These results also hold true when analyzing time spent on each activity comparing mothers to fathers.

While we observe significant changes in time use patterns across the years, less noticeable is a reduction in the overall time use gender gap, which we refer to as the 'egalitarian' gap, which remains the crux of the issue regarding allocation of time. When analyzing by gender and parental status, we observe that the gender gap (i.e. differences in time spent for females and males) became more egalitarian (i.e. the gap is lessening) with regards to leisure and sports over the years. For example, mothers spent 57 fewer minutes in leisure/sports activities in 2019, compared to fathers, while it was 25 fewer minutes in 2022. While during the height of the COVID-19 pandemic (i.e. 2020), the gender gap in mean time spent on work-related activities decreased significantly (i.e. from 64 min in 2019 to 25 min in 2020), this gap widened again in 2021. In 2022, the gendered gap in work-related activities (47 min) was on par with the gendered gap in 2018 (48 min).

Additionally, little (to no) egalitarian allocation of time is observed with regards to unpaid care work, especially in housework and food preparation. For instance, focusing on the gender gap in time spent on food preparation, it remained relatively stabled (i.e. between 18 and 21 min) between 2019 – 2022; similarly, time spent in housework varied between 18 and 20 min; and time spent in household activities varied between 30 and 35 min. Only a small decrease in the gender gap was observed in time spent in household activities in 2020, though it increased further in 2021. Similar observations were noted when analyzing the differences for mothers and fathers. Additionally, time spent in caring for children became more unequal in 2020, though decreased in 2022. While we cannot attribute the changes (or lack thereof) in the allocation of time use to any one theory (e.g. bargaining or conventional social norms), from our results, we can infer that, seemingly, no notable changes to the gendered-division of time use were observed as a result of the COVID-19 pandemic. Women, perhaps on top of their work-related activities, bore the brunt of unpaid care work activities throughout the pandemic.

6. Limitations

While we attempt to minimize the number of limitations, a number of limitations remain. Most notably, the COVID-19 pandemic, which is the central focus of our study, led to several shutdowns and delays, including the collection of time use data. As such, our study is limited by the fact that no data was collected between January–March of 2020, limiting our scope of analyses. Due to this and the survey weighting issues caused, we had to run separate yearly regression analyses, instead of controlling for the year in the study. Similarly, due to sample size limitations, we were not able to further investigate the time use differences observed among racial/ethnic groups. Therefore, we are not able to observe time use differences among specific groups that were likely most impacted by the COVID-19 pandemic, such as single mothers, minority group members, and the unemployed.

Another limitation of this study is nonreporting of secondary activities. The prevalence of a hustle culture that attempts to maximize time in daily life could lead to misreporting of time use allocation. For example, mothers may consider their leisure time to be playing with their children or grabbing their children a snack when on a virtual work call. Such activities were likely exacerbated during the economic shutdowns and work-from-home orders stemming from the COVID-19 pandemic. Additionally, during the COVID-19 pandemic, individuals and families had to navigate a complex balance of work, childcare, and household responsibilities, often leading to increased multitasking. Indeed, research indicates that the COVID-19 lockdown was significantly impacted by the 'hustle anthem'. Rather than a 'second shift' culture, a 'constant shift' was generated, and even celebrated in advertisements. Such a 'constant shift' in work not only disproportionately impacted those of color and women, but women were encouraged to pursue this (Orgad, 2021). The reporting of secondary activities, especially for mothers, could more accurately describe time spent on specific activities and help mitigate response bias. Currently, time use data is limited and there is no international standard on how to measure simultaneous activities (Ferrant & Thim, 2019).

Third, significant changes within the workforce were observed as a result of COVID-19, with the increase in remote work (i.e. work from home measures). Some individuals, typically those with higher levels of education, were able to conduct their work remotely while others (e.g. service-sector and healthcare workers) were largely unable to do so (Buder & Jennings, 2023). This has important implications as working for home allows, generally speaking, for greater flexibility and autonomy, and less stress (e.g. due to reduced exposure to COVID-19). Given the availability of data, however, we are not able to control for remote work, limiting our analysis, as it may explain the significant changes in work-related activities observed across the years.

7. Conclusion

The COVID-19 pandemic has had substantial, and lingering, economic, social, and health consequences globally. Well-before the COVID-19 pandemic, time use inequalities were present in our society, further exacerbating economic stratification observed by gender and class. With the onset of the COVID-19 pandemic and subsequent shutdown of schools, a number of studies found more gender-equal distribution of household activities (e.g. Petts et al., 2020), while others have described

the pandemic as a 'shecession' due to the disproportionate effects observed among women. COVID-19 altered time in work-related activities, as seen by a significant reduction in the labor force participation rate and the increase in remote work.

We contribute to the literature through our analysis of time spent in six different time use activities by gender and parental status prior to the COVID-19 pandemic (years 2018 and 2019) and during the COVID-19 pandemic (years 2020–2022). While we note several time use differences prior to and COVID-19, generally speaking, the 'egalitarian' gap in time use differences remains largely consistent over the years, with few areas showing more egalitarian distribution of time use allocation in 2022, as to compared to 2018 or 2019. Fathers initially increased their involvement in childcare during the pandemic, suggesting a potential move toward a more egalitarian distribution of responsibilities. However, this trend was short-lived, reverting back to traditional roles post-pandemic. Though the 'egalitarian' gap in childcare has narrowed over the year, mothers continue to bear the disproportionate burden of caring for children.

Similarly, women and mothers continue to spend a disproportionate amount of time on household activities, including housework and food preparation. Men and fathers, on the other hand, continue to spend more time on work-related activities, likely furthering their bargaining power, in the case of a two-person household (e.g. married or domestic partnerships), though the gap has narrowed over the years. The gender gap observed in leisure and sports activities (i.e. men enjoying more time in leisure activities) highlights the disparities in available free time and opportunities for relation for women, though this gap has narrowed over the years. The continued unequal division of unpaid care work (i.e. household responsibilities and caregiving) aligns with broader economic inequalities. As observed, women and mothers faced increases in caregiving demands as a result of the COVID-19 pandemic, which may have had negative impacts on their career-advancements. This perpetuates economic stratification, as it impacts their abilities not only to fully participate in the workforce but also to seek advancements in their careers, leading to more financial security.

It should be noted that in this study, we are only able to assess national averages and not personal preferences. We cannot hypothesize or state with any accuracy that these were 'choices' and 'preferences' made by men and women. We can, however, infer the economic implications of the time use allocation and inequalities observed. Time spent on unpaid care work saw little egalitarian movements as a result of the COVID-19 pandemic, with women and mothers continuing to spend a disproportionate amount of time on unpaid care activities (i.e. household activities, housework, and caring for children), limiting their ability to conduct paid work activities, thus restricting their financial resources. While fathers did increase their involvement in childcare during the COVID-19 pandemic, this increase was short-lived and insufficient to offset the unequal distribution of household labor.

While these short-term consequences regarding time use allocation as a result of the COVID-19 pandemic have been observed and noted, uncertainty remains regarding the long-term impact, which cannot be accessed until more time use data becomes available. Overall, while we saw a number of temporary shifts in time use activities during the pandemic, the broader economic stratification remained largely intact. In particular, the allocation of time spent in unpaid care work remains disproportionately spent for women with little, to no progress, being made with a more 'egalitarian' gap in the division of household labor. The COVID-19 pandemic did little to ease the burden for women and the gendered-norms remain, from our findings, entrenched. To address the

heightened disparities in labor distribution exacerbated by the COVID-19 pandemic, it is imperative to establish more robust institutional frameworks and policies, such as comprehensive parental leave provisions. These measures are essential to fostering greater equity, both within households and in the broader societal context. Furthermore, it is crucial to integrate unpaid care work activities into economic modeling, so that they can be formally acknowledged and leveraged when making policy decisions.

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Data Availability Statement

All data for this study are publicly available and can be accessed through the public website.

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Appendix A

Table A1. Weighted regression results for time spent on household activities (all) by year.

	2018	2019	2020	2021	2022
Intercept	39.07**	29.28*	49.78**	83.25***	65.07***
	(13.88)	(13.39)	(18.01)	(18.10)	(17.12)
Age	0.66***	0.68***	1.01***	0.52**	0.64***
	(0.16)	(0.15)	(0.17)	(0.18)	(0.16)
Age squared	−0.04***	−0.02*	−0.05***	−0.05***	−0.03*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Female	39.97***	32.57***	28.39***	34.59***	30.38***
	(3.35)	(3.15)	(3.41)	(3.65)	(3.50)
North	−1.38	−0.94	4.18	0.81	8.49
	(4.66)	(4.43)	(5.00)	(4.92)	(5.20)
West	1.86	−2.62	−2.00	3.13	1.24
	(4.51)	(4.52)	(4.61)	(4.62)	(4.45)
Midwest	−5.46	−6.41	0.56	4.12	−4.22
	(4.28)	(4.30)	(4.70)	(5.04)	(4.49)
Black non-Hispanic	−30.95***	−25.07***	−31.54***	−28.85***	−27.45***
	(4.45)	(4.41)	(5.53)	(5.40)	(5.41)
Asian non-Hispanic	−1.08	−19.14**	−17.69*	−0.02	−13.07*
	(6.59)	(7.36)	(6.99)	(7.66)	(6.10)
Hispanic	3.49	−7.89	6.50	−4.90	−3.87
	(5.29)	(4.41)	(5.30)	(4.73)	(5.72)
High school	−4.32	3.93	17.23*	−1.69	−6.18
	(7.26)	(6.99)	(7.72)	(8.05)	(8.19)
Some college	−2.28	−1.36	9.98	−1.77	3.79
	(7.31)	(7.03)	(7.19)	(8.04)	(8.26)
Bachelor's degree	−6.86	6.55	18.95*	−1.76	1.09
	(7.49)	(7.07)	(7.52)	(8.13)	(8.28)
Master's degree or higher	−19.39*	−0.34	21.06*	−8.21	3.58
	(7.71)	(7.57)	(8.42)	(8.43)	(8.61)
Not married	−17.60***	−10.73*	−5.93	−12.63*	−15.30**
	(4.83)	(4.50)	(5.63)	(5.60)	(4.88)
Never married	−20.47***	−12.04**	−14.41**	−20.04***	−17.13***
	(4.86)	(4.55)	(5.29)	(5.44)	(4.78)
Citizen	−4.17	−8.72	−10.90	−3.38	−6.88
	(6.51)	(6.27)	(6.63)	(6.49)	(6.93)
Unemployed	43.26***	55.63***	61.84***	37.28***	62.96***
	(10.26)	(13.00)	(10.17)	(10.29)	(12.27)
Not in labor force	27.09***	48.14***	37.57***	40.66***	45.86***
	(5.50)	(5.92)	(5.95)	(5.84)	(6.43)
Tenure	4.52	9.23*	10.40*	4.64	12.85**
	(3.87)	(3.94)	(4.30)	(4.37)	(3.98)
Housetype	10.21	8.68	−28.77*	−20.00	−18.72
	(8.67)	(7.49)	(12.89)	(11.12)	(11.38)
Family income	0.28	−1.48	−1.58	−9.53*	−5.84
	(3.81)	(4.03)	(4.44)	(4.40)	(4.28)
Weekend	32.85***	35.37***	40.11***	35.82***	39.61***
	(3.22)	(3.23)	(3.54)	(3.49)	(3.59)
Holiday	46.59**	12.23	27.85	37.44*	24.39
	(14.57)	(9.76)	(17.34)	(16.53)	(14.73)
One child	1.93	5.91	3.03	−7.49	−5.29
	(6.18)	(5.59)	(6.13)	(5.98)	(6.11)
Two children	3.56	10.12	1.44	4.76	−5.23
	(7.03)	(7.11)	(7.33)	(7.66)	(7.38)
Three children	4.26	15.63	26.23*	14.59	−8.56
	(8.70)	(8.76)	(11.57)	(10.17)	(10.53)
Four or more children	21.07	34.82**	27.18	16.65	6.82
	(11.52)	(12.33)	(14.49)	(13.49)	(14.83)
Child aged 0–5	2.93	4.82	1.36	4.06	9.93
	(6.53)	(6.81)	(7.28)	(7.00)	(7.43)
Child aged 6–12	1.87	−5.30	−6.87	6.10	2.23
	(6.71)	(6.99)	(7.12)	(7.15)	(7.09)
N	5791	5714	5105	5249	4588

Standard errors in parentheses.
*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Table A2. Weighted regression results for time spent on housework by year.

	2018	2019	2020	2021	2022
Intercept	12.85	10.32	5.18	29.66**	24.32**
	(7.66)	(6.98)	(7.43)	(9.63)	(9.04)
Age	0.10	0.17*	0.24**	0.20**	0.01
	(0.08)	(0.07)	(0.08)	(0.08)	(0.09)
Age squared	−0.02***	−0.01	−0.01*	−0.02**	−0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Female	24.90***	17.59***	20.22***	20.25***	19.67***
	(1.79)	(1.48)	(1.75)	(1.62)	(1.76)
North	1.40	1.53	0.11	−0.06	0.89
	(2.60)	(2.34)	(2.46)	(2.30)	(2.53)
West	0.98	−3.56	−0.75	−1.48	−1.30
	(2.28)	(2.13)	(2.35)	(2.16)	(2.46)
Midwest	−1.85	−1.26	3.45	1.08	−1.88
	(2.06)	(2.06)	(2.26)	(2.15)	(2.27)
Black non-Hispanic	−7.14**	−3.08	−10.05***	−5.54*	−6.96*
	(2.56)	(2.27)	(2.25)	(2.44)	(2.71)
Asian non-Hispanic	1.30	−4.14	−9.13***	3.31	−2.38
	(4.34)	(4.41)	(2.76)	(3.75)	(3.73)
Hispanic	2.40	5.66*	5.89*	3.25	0.02
	(2.55)	(2.37)	(2.87)	(2.52)	(2.89)
High school	−0.55	−8.65*	7.21	−8.33	1.85
	(4.14)	(4.26)	(3.88)	(4.43)	(4.21)
Some college	0.75	−9.51*	1.66	−4.69	3.97
	(4.31)	(4.31)	(3.60)	(4.61)	(4.01)
Bachelor's degree	−4.74	−3.28	5.71	−8.05	0.21
	(4.24)	(4.43)	(3.77)	(4.50)	(4.03)
Master's degree or higher	−7.19	−8.75	2.94	−9.53*	0.35
	(4.41)	(4.56)	(3.94)	(4.58)	(4.26)
Not married	−4.92*	−3.30	4.00	−2.59	−3.47
	(2.42)	(2.22)	(2.87)	(2.56)	(2.57)
Never married	−4.28	−5.50*	−2.27	−4.63*	−6.38*
	(2.60)	(2.39)	(2.43)	(2.31)	(2.51)
Citizen	−5.04	−2.33	−7.41*	0.98	−7.58*
	(3.98)	(3.35)	(3.46)	(3.53)	(3.71)
Unemployed	14.37*	13.91**	21.10***	13.52**	25.77***
	(5.83)	(5.09)	(5.53)	(4.73)	(7.79)
Not in labor force	13.15***	21.33***	14.67***	16.33***	19.28***
	(3.02)	(3.13)	(2.96)	(2.97)	(3.40)
Tenure	−1.70	−1.69	−1.93	−4.99*	3.83
	(2.02)	(1.91)	(2.23)	(2.02)	(1.99)
Housetype	2.27	2.33	−3.72	−15.91*	−6.81
	(4.54)	(3.60)	(5.77)	(6.86)	(5.95)
Family income	−0.81	−0.98	−0.23	−4.36*	−4.60*
	(1.94)	(1.90)	(2.22)	(1.97)	(2.15)
Weekend	12.98***	15.45***	15.04***	16.74***	17.89***
	(1.68)	(1.60)	(1.85)	(1.68)	(1.90)
Holiday	16.03*	−3.85	−1.61	10.64	3.36
	(8.01)	(4.37)	(5.64)	(8.42)	(6.33)
One child	3.01	2.44	2.07	3.74	−4.40
	(3.49)	(2.72)	(3.54)	(3.03)	(3.10)
Two children	5.49	2.07	1.77	5.82	−2.02
	(3.79)	(3.17)	(3.68)	(3.67)	(3.98)
Three children	10.67*	9.63	12.81*	7.05	−7.99
	(5.06)	(5.08)	(5.44)	(5.12)	(5.00)
Four or more children	17.05*	4.81	15.75*	19.18*	−4.24
	(7.69)	(6.67)	(7.59)	(8.22)	(7.11)
Child aged 0–5	−2.32	5.36	4.43	−1.14	4.29
	(3.57)	(3.45)	(3.92)	(3.42)	(3.75)
Child aged 6–12	−0.69	0.40	−0.94	−0.32	4.71
	(3.83)	(3.40)	(3.71)	(3.68)	(3.78)
N	5791	5714	5105	5249	4588

Standard errors in parentheses.
*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Table A3. Weighted regression results for time spent on food preparation by year.

	2018	2019	2020	2021	2022
Intercept	10.42	17.98**	18.10**	26.15***	20.23*
	(5.54)	(6.32)	(6.71)	(7.48)	(7.97)
Age	0.22***	0.15*	0.18*	0.05	0.23***
	(0.07)	(0.07)	(0.08)	(0.07)	(0.07)
Age squared	−0.01**	−0.02**	−0.01*	−0.02***	−0.02**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)
Female	20.45***	18.07***	20.86***	17.98***	18.18***
	(1.39)	(1.46)	(1.41)	(1.48)	(1.50)
North	0.44	0.70	4.05	5.28*	5.50*
	(1.93)	(1.97)	(2.21)	(2.23)	(2.25)
West	−3.35	0.53	0.46	1.35	2.34
	(1.89)	(2.13)	(1.80)	(1.83)	(1.92)
Midwest	−1.55	−2.60	−0.77	2.17	1.01
	(1.80)	(1.69)	(1.90)	(1.79)	(1.94)
Black non-Hispanic	−7.30***	−2.98	−5.10*	−2.69	−2.53
	(2.07)	(2.22)	(2.29)	(2.16)	(2.71)
Asian non-Hispanic	12.49***	−0.34	7.58*	10.11**	3.87
	(3.23)	(3.45)	(3.33)	(3.32)	(3.27)
Hispanic	5.02*	0.41	4.45	3.22	1.73
	(2.31)	(2.23)	(2.28)	(2.16)	(2.23)
High school	0.53	4.74	6.23*	4.70	−2.85
	(3.40)	(3.17)	(3.02)	(3.53)	(4.17)
Some college	−0.11	2.23	2.14	1.92	−1.17
	(3.32)	(3.20)	(2.78)	(3.31)	(4.10)
Bachelor's degree	−0.76	4.59	8.17**	5.62	−1.10
	(3.50)	(3.22)	(3.02)	(3.43)	(4.23)
Master's degree or higher	−2.63	2.99	7.26*	3.96	2.87
	(3.62)	(3.42)	(3.17)	(3.61)	(4.41)
Not married	−6.55**	−2.58	−2.97	−2.97	−5.25*
	(2.02)	(2.13)	(2.18)	(2.22)	(2.19)
Never married	−9.23***	−2.15	−10.46***	−8.69***	−3.93
	(2.12)	(2.01)	(2.42)	(2.05)	(2.22)
Citizen	−1.76	−8.78**	−7.80**	−4.35	−7.74*
	(2.65)	(2.98)	(3.02)	(3.36)	(3.21)
Unemployed	15.25***	15.62***	13.34**	22.38***	17.83***
	(4.45)	(4.06)	(4.47)	(4.80)	(5.08)
Not in labor force	12.28***	18.83***	14.30***	16.07***	16.39***
	(2.30)	(3.02)	(2.33)	(2.35)	(2.77)
Tenure	−3.40*	−1.69	−3.63*	−3.27	−0.53
	(1.67)	(1.71)	(1.69)	(1.84)	(1.77)
Housetype	4.15	0.29	−1.50	−4.33	0.28
	(2.93)	(3.53)	(3.64)	(4.32)	(4.86)
Family income	1.24	−0.90	1.12	0.52	−2.97
	(1.66)	(1.67)	(1.78)	(1.74)	(1.77)
Weekend	6.06***	5.28***	5.06***	2.67*	2.75
	(1.34)	(1.38)	(1.40)	(1.34)	(1.50)
Holiday	11.11	15.61**	8.12	14.82	16.93
	(6.50)	(5.74)	(6.41)	(7.93)	(9.71)
One child	5.91*	6.77*	0.15	−4.98*	2.35
	(2.68)	(2.74)	(2.45)	(2.40)	(2.79)
Two children	6.50*	12.50***	3.08	1.17	10.40**
	(2.94)	(3.37)	(3.14)	(3.16)	(3.65)
Three children	9.56*	11.50**	9.00*	8.51	9.32
	(4.10)	(4.14)	(4.48)	(4.62)	(5.26)
Four or more children	14.27*	20.35**	9.00	5.31	9.66
	(6.21)	(6.45)	(6.03)	(6.98)	(6.25)
Child aged 0–5	2.96	4.61	6.43*	11.27***	4.75
	(2.92)	(3.32)	(3.07)	(3.10)	(3.70)
Child aged 6–12	−1.88	−1.68	1.89	8.15**	−1.52
	(2.85)	(3.28)	(3.02)	(2.85)	(3.53)
N	5791	5714	5105	5249	4588

Standard errors in parentheses.
*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Table A4. Weighted regression results for time spent on personal care by year.

	2018	2019	2020	2021	2022
Intercept	581.74***	594.75***	594.43***	541.80***	591.80***
	(19.39)	(18.81)	(22.64)	(23.98)	(20.63)
Age	−0.82***	−0.92***	−0.99***	−0.40	−1.14***
	(0.21)	(0.21)	(0.22)	(0.23)	(0.22)
Age squared	0.01	0.01	0.02	0.01	0.03
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Female	19.93***	24.55***	17.83***	17.46***	30.53***
	(4.32)	(4.31)	(4.37)	(4.27)	(4.89)
North	5.13	−1.88	−0.51	−6.07	−2.05
	(6.58)	(6.28)	(6.45)	(6.64)	(6.77)
West	4.39	−12.08*	−2.18	−0.16	1.10
	(5.83)	(5.75)	(5.52)	(5.46)	(6.19)
Midwest	3.69	−7.76	−6.85	0.56	−0.16
	(5.74)	(5.52)	(5.52)	(5.47)	(6.57)
Black non-Hispanic	18.27*	9.07	19.99*	−0.04	24.74*
	(8.30)	(8.35)	(8.41)	(8.13)	(9.71)
Asian non-Hispanic	40.14***	1.99	12.84	3.99	10.76
	(11.96)	(8.79)	(8.34)	(7.49)	(9.52)
Hispanic	8.84	15.49*	11.17	9.21	11.47
	(6.50)	(7.03)	(6.96)	(6.29)	(7.03)
High school	−21.04*	−9.22	−13.88	−7.27	16.68
	(9.53)	(9.85)	(11.47)	(10.05)	(11.80)
Some college	−17.05	−14.47	−16.46	−27.92**	7.26
	(9.49)	(9.72)	(11.31)	(10.28)	(11.74)
Bachelor's degree	−29.39**	−21.23*	−32.10**	−25.87*	−5.84
	(9.54)	(9.81)	(11.62)	(10.14)	(11.48)
Master's degree or higher	−22.17*	−27.32**	−31.45**	−37.72***	−4.43
	(10.19)	(10.15)	(11.70)	(10.47)	(11.97)
Not married	0.50	5.06	12.94*	13.70	16.27*
	(6.51)	(5.97)	(5.91)	(7.08)	(7.21)
Never married	11.01	6.81	7.57	22.49***	11.91
	(6.19)	(5.97)	(6.49)	(6.78)	(6.66)
Citizen	5.42	−17.44*	9.93	−12.73	−15.17
	(10.44)	(8.82)	(8.08)	(8.40)	(9.53)
Unemployed	53.61***	39.39*	50.76***	24.48	31.78
	(12.48)	(15.67)	(11.37)	(15.27)	(18.19)
Not in labor force	43.15***	60.37***	51.23***	44.23***	53.54***
	(6.76)	(7.46)	(6.76)	(6.48)	(8.03)
Tenure	9.80	−8.00	−11.18*	1.23	−7.96
	(5.67)	(5.27)	(5.66)	(5.24)	(6.04)
Housetype	−6.94	12.88	1.09	32.08*	−4.30
	(12.10)	(11.26)	(18.14)	(13.75)	(12.40)
Family income	−22.44***	0.82	−0.48	8.04	−3.40
	(5.64)	(5.27)	(5.32)	(5.18)	(5.96)
Weekend	62.29***	58.32***	62.70***	56.50***	60.72***
	(4.09)	(4.09)	(4.00)	(4.11)	(4.56)
Holiday	66.52***	60.66***	67.21**	67.47***	52.12**
	(15.58)	(16.15)	(21.72)	(19.13)	(15.98)
One child	−6.76	−13.42	−4.84	2.61	−1.50
	(6.80)	(8.97)	(8.37)	(7.52)	(9.41)
Two children	−2.39	−16.43	−6.51	−9.44	−2.08
	(9.15)	(9.52)	(9.94)	(9.72)	(13.24)
Three children	−1.53	−20.71	−31.46**	−21.65	−18.97
	(11.22)	(12.23)	(12.00)	(11.71)	(14.86)
Four or more children	1.49	−23.92	−34.02*	−10.48	−24.88
	(15.68)	(16.41)	(16.70)	(14.91)	(17.32)
Child aged 0–5	−17.26*	−14.96	−9.26	−8.93	−5.63
	(8.67)	(9.10)	(9.71)	(8.84)	(11.66)
Child aged 6–12	−11.97	3.24	−5.48	−0.17	−8.45
	(8.59)	(9.55)	(9.22)	(8.84)	(12.06)
N	5791	5714	5105	5249	4588

Standard errors in parentheses.
*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Table A5. Weighted regression results for time spent on leisure and sports by year.

	2018	2019	2020	2021	2022
Intercept	245.68***	213.00***	283.86***	239.03***	261.92***
	(30.99)	(29.38)	(30.02)	(30.59)	(31.01)
Age	0.70*	1.29***	0.11	0.63*	−0.06
	(0.33)	(0.31)	(0.32)	(0.30)	(0.33)
Age squared	0.05	0.02	0.06*	0.02	0.02
	(0.02)	(0.02)	(0.03)	(0.02)	(0.03)
Female	−52.39***	−44.19***	−66.42***	−38.12***	−36.60***
	(6.43)	(6.91)	(6.77)	(6.38)	(7.69)
North	2.94	18.51*	−3.91	0.50	−4.30
	(10.18)	(9.19)	(9.40)	(10.34)	(12.06)
West	−6.20	18.57	6.25	1.88	5.26
	(8.96)	(9.97)	(9.10)	(8.47)	(9.48)
Midwest	−5.05	13.26	11.45	−9.84	−8.11
	(8.02)	(8.62)	(9.60)	(7.79)	(9.47)
Black non-Hispanic	9.46	15.87	−10.55	−4.14	−4.89
	(10.86)	(11.73)	(11.74)	(10.84)	(12.16)
Asian non-Hispanic	−34.19*	−32.27*	−44.10**	−22.66	3.87
	(14.54)	(15.83)	(15.20)	(13.71)	(23.61)
Hispanic	−1.96	−25.95*	−20.76*	−11.64	−25.59**
	(11.05)	(11.09)	(10.29)	(9.67)	(9.81)
High school	−1.02	−24.50	−19.78	−3.82	−9.62
	(14.13)	(15.29)	(17.70)	(13.73)	(16.32)
Some college	−9.09	−37.74*	−23.88	−14.26	−23.06
	(14.11)	(16.36)	(17.62)	(14.21)	(16.38)
Bachelor's degree	−14.71	−47.56**	−26.06	−21.28	−27.01
	(14.18)	(16.01)	(18.01)	(13.86)	(16.57)
Master's degree or higher	−24.44	−54.27**	−26.16	−23.71	−35.30*
	(14.71)	(16.58)	(17.94)	(14.92)	(17.16)
Not married	14.96	9.50	16.62	−9.23	13.23
	(10.09)	(8.81)	(8.91)	(9.13)	(9.56)
Never married	27.51**	40.80***	32.38***	22.32*	21.44*
	(9.01)	(9.17)	(9.38)	(8.76)	(9.84)
Citizen	31.65*	38.87**	14.59	34.04**	21.14
	(13.47)	(12.45)	(12.67)	(11.79)	(14.49)
Unemployed	144.64***	144.30***	174.64***	100.03***	177.22***
	(21.19)	(18.65)	(22.01)	(26.16)	(26.63)
Not in labor force	156.33***	139.30***	149.23***	139.03***	112.13***
	(11.09)	(13.08)	(11.46)	(10.10)	(12.53)
Tenure	−3.98	−0.36	9.83	1.63	7.13
	(8.03)	(8.18)	(8.27)	(7.85)	(8.44)
Housetype	−56.61**	−39.97	−17.19	−27.45	−15.92
	(18.70)	(21.40)	(16.29)	(20.71)	(18.32)
Family income	3.24	−5.90	−21.75*	−13.73	−4.55
	(8.09)	(8.71)	(8.80)	(8.05)	(8.73)
Weekend	135.38***	123.50***	137.51***	136.48***	141.39***
	(6.51)	(6.31)	(6.48)	(6.37)	(7.02)
Holiday	152.42***	175.76***	46.53	83.57**	135.73***
	(30.58)	(28.53)	(44.86)	(25.56)	(28.34)
One child	−12.63	−13.40	−23.19	−21.37*	−29.40
	(12.20)	(11.85)	(12.94)	(10.88)	(16.78)
Two children	−35.56*	−10.06	−37.56**	−35.73**	−35.97*
	(14.86)	(14.60)	(13.52)	(13.42)	(16.74)
Three children	−58.00***	−46.42**	−22.95	−46.24**	−18.83
	(17.39)	(17.40)	(17.51)	(17.49)	(22.17)
Four or more children	−43.43*	−20.69	−117.86***	−78.81***	9.92
	(21.15)	(21.56)	(24.94)	(21.59)	(27.14)
Child aged 0–5	−26.46	−15.98	−33.07*	−32.94**	−39.60*
	(13.83)	(14.12)	(13.31)	(12.35)	(15.97)
Child aged 6–12	−4.80	−19.70	−3.09	−2.53	−21.12
	(13.91)	(13.30)	(13.39)	(12.77)	(16.23)
N	5791	5714	5105	5249	4588

Standard errors in parentheses.
*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Table A6. Weighted regression results for time spent on paid employment by year.

	2018	2019	2020	2021	2022
Intercept	447.54***	504.53***	376.96***	476.51***	443.47***
	(41.65)	(41.43)	(49.09)	(45.69)	(45.21)
Age	0.78	−0.16	1.03*	0.45	1.26**
	(0.48)	(0.46)	(0.48)	(0.52)	(0.46)
Age squared	−0.12**	−0.11**	−0.16***	−0.10**	−0.14***
	(0.04)	(0.03)	(0.04)	(0.04)	(0.04)
Female	−48.20***	−63.74***	−24.87*	−58.75***	−47.03***
	(9.86)	(9.29)	(9.76)	(9.23)	(9.81)
North	−32.28*	−14.27	3.11	−13.84	14.54
	(15.09)	(13.78)	(13.38)	(15.17)	(13.90)
West	−22.73	−22.95	2.37	−21.89	4.38
	(12.80)	(12.12)	(13.02)	(12.25)	(12.43)
Midwest	−7.47	10.16	−2.70	21.24	29.55*
	(12.24)	(12.17)	(13.44)	(11.69)	(12.43)
Black non-Hispanic	−11.04	6.93	39.16*	26.20	19.24
	(16.10)	(15.52)	(18.02)	(16.85)	(19.04)
Asian non-Hispanic	−0.49	20.66	32.77	−2.18	−21.66
	(24.38)	(19.57)	(21.42)	(17.50)	(22.26)
Hispanic	−2.05	31.63*	8.97	32.80*	29.15*
	(15.14)	(15.46)	(15.13)	(13.46)	(13.84)
High school	35.70	4.28	29.73	2.76	−25.53
	(22.33)	(23.76)	(27.35)	(24.60)	(23.36)
Some college	4.30	6.00	5.61	5.83	−38.59
	(22.38)	(24.40)	(26.75)	(24.20)	(23.26)
Bachelor's degree	33.80	2.84	0.20	11.40	−32.69
	(22.61)	(24.37)	(26.57)	(24.12)	(23.07)
Master's degree or higher	29.80	12.41	−9.65	33.12	−31.95
	(23.49)	(24.49)	(27.08)	(25.01)	(23.66)
Not married	14.57	7.62	−16.14	20.54	−6.13
	(12.72)	(12.99)	(13.20)	(14.04)	(13.65)
Never married	−6.01	−22.49	−12.95	−1.96	−6.75
	(12.45)	(13.35)	(14.86)	(15.37)	(13.28)
Citizen	12.96	26.80	10.78	8.12	−8.97
	(18.01)	(18.28)	(19.38)	(18.37)	(22.32)
Tenure	−37.79**	−18.18	−10.21	−20.35	−23.47*
	(11.89)	(11.58)	(13.06)	(11.38)	(11.75)
Housetype	19.71	−1.90	49.18	−22.63	34.81
	(27.43)	(27.73)	(35.25)	(25.53)	(27.18)
Family income	12.94	5.56	8.11	12.10	13.32
	(11.66)	(11.88)	(12.72)	(11.45)	(12.16)
Weekend	−335.51***	−320.50***	−324.10***	−326.70***	−331.52***
	(8.48)	(8.35)	(8.77)	(8.60)	(8.71)
Holiday	−366.94***	−315.70***	−235.83***	−188.20***	−266.27***
	(22.03)	(29.60)	(47.28)	(55.77)	(32.39)
One child	−4.70	−40.65*	−17.73	19.54	−8.86
	(17.22)	(16.38)	(17.92)	(14.79)	(19.08)
Two children	−4.39	−38.66*	−11.58	17.36	−5.76
	(18.46)	(19.22)	(20.49)	(18.23)	(22.70)
Three children	1.81	−22.37	−27.96	19.06	−13.76
	(24.41)	(24.33)	(29.17)	(25.16)	(28.75)
Four or more children	−34.30	−78.37**	62.48	69.20*	−57.13
	(24.72)	(29.89)	(49.55)	(35.14)	(40.09)
Child aged 0–5	12.70	8.60	2.63	−17.77	12.39
	(17.39)	(18.49)	(20.54)	(17.73)	(20.00)
Child aged 6–12	−5.05	11.22	17.12	−21.80	4.18
	(17.98)	(18.51)	(20.01)	(17.32)	(21.27)
N	4782	4741	4099	4326	3827

Standard errors in parentheses.
*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Appendix B

Table B1. Weighted regression results for time spent on household activities (all) by year, among parents.

	2018	2019	2020	2021	2022
Intercept	21.13	50.17*	72.80**	51.04	90.04**
	(21.31)	(24.84)	(27.67)	(29.34)	(28.04)
Age	0.84**	0.42	0.76*	1.08**	0.50
	(0.31)	(0.32)	(0.34)	(0.41)	(0.32)
Age squared	−0.06**	−0.05*	−0.09***	−0.08**	−0.06*
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Female	45.96***	43.78***	43.25***	50.32***	36.27***
	(4.87)	(4.36)	(5.25)	(5.19)	(5.43)
North	−1.16	11.60	−2.04	6.33	9.79
	(6.82)	(6.54)	(7.09)	(7.70)	(7.37)
West	2.10	8.45	−9.09	2.42	−4.99
	(6.30)	(6.13)	(6.72)	(6.89)	(7.19)
Midwest	−4.60	−0.13	−2.72	5.33	0.89
	(5.65)	(5.71)	(6.31)	(6.75)	(7.63)
Black non-Hispanic	−29.22***	−14.08	−47.27***	−18.66*	−21.74**
	(8.23)	(7.44)	(7.43)	(8.01)	(8.39)
Asian non-Hispanic	−1.66	−14.75	−29.32***	7.17	−12.29
	(7.86)	(9.19)	(7.57)	(9.62)	(10.55)
Hispanic	−2.60	−5.80	0.66	5.35	−2.43
	(6.70)	(6.26)	(7.64)	(7.54)	(8.64)
High school	−5.23	−3.43	19.24	0.85	−12.69
	(9.55)	(11.25)	(11.82)	(11.23)	(11.52)
Some college	−9.29	−14.52	7.59	−4.77	6.28
	(9.40)	(10.94)	(10.74)	(11.50)	(12.68)
Bachelor's degree	−14.71	−1.65	10.97	−10.79	−2.63
	(9.75)	(11.49)	(11.20)	(11.88)	(12.19)
Master's degree or higher	−24.73*	−17.71	4.23	−19.95	−1.79
	(10.22)	(11.52)	(11.74)	(12.10)	(12.93)
Not married	−13.39	−7.58	−6.44	−13.63	−18.00*
	(6.94)	(8.19)	(8.36)	(9.35)	(8.46)
Never married	−14.86	−15.69	−17.35	−10.06	−19.34*
	(8.03)	(8.22)	(9.08)	(9.97)	(9.02)
Citizen	−3.96	−8.24	−15.25	−1.33	−8.66
	(8.26)	(8.90)	(9.74)	(8.92)	(10.27)
Unemployed	65.91***	56.54***	80.51***	67.28***	44.54**
	(14.31)	(12.72)	(17.11)	(15.18)	(14.54)
Not in labor force	50.79***	75.52***	57.93***	51.50***	73.61***
	(7.63)	(9.23)	(8.02)	(8.34)	(10.85)
Tenure	8.25	19.13**	6.35	−8.24	12.29
	(6.00)	(6.12)	(7.50)	(7.45)	(6.61)
Housetype	17.15	1.29	−19.66	−28.60	−36.16
	(10.80)	(13.24)	(19.01)	(16.60)	(18.69)
Family income	5.14	−11.81*	−4.60	−0.54	−7.20
	(5.76)	(5.70)	(6.96)	(7.77)	(7.72)
Weekend	31.09***	32.27***	34.66***	36.95***	34.34***
	(4.48)	(4.61)	(5.05)	(5.09)	(5.58)
Holiday	44.09**	28.21	39.37	21.86	21.30
	(13.43)	(14.94)	(25.33)	(26.05)	(15.62)
One child	0.71	4.17	−2.61	11.96*	−4.10
	(5.11)	(5.47)	(5.42)	(6.05)	(5.94)
Two children	1.18	4.05	17.14	19.00*	−7.73
	(7.00)	(7.48)	(10.08)	(8.50)	(9.27)
Three children	18.99	19.72	17.92	20.59	5.64
	(10.14)	(10.93)	(12.81)	(12.03)	(13.48)
Child aged 0–5	4.72	3.04	−0.09	10.38	7.11
	(6.77)	(7.06)	(7.71)	(7.82)	(7.63)
Child aged 6–12	2.08	−6.82	−9.17	8.55	0.58
	(6.72)	(7.00)	(7.38)	(7.34)	(7.23)
N	2859	2702	2304	2364	1924

Standard errors in parentheses.
*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Table B2. Weighted regression results for time spent on housework by year, among parents.

	2018	2019	2020	2021	2022
Intercept	13.70	19.16	20.20	27.23	16.30
	(13.31)	(12.43)	(14.28)	(15.36)	(14.25)
Age	0.10	−0.05	0.02	0.22	0.23
	(0.17)	(0.16)	(0.17)	(0.18)	(0.17)
Age squared	−0.03*	−0.00	−0.04***	−0.03*	−0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Female	28.96***	25.31***	25.10***	26.34***	22.79***
	(2.79)	(2.34)	(2.75)	(2.57)	(2.58)
North	1.76	3.59	−2.36	4.17	−2.85
	(4.50)	(3.81)	(3.59)	(4.03)	(3.67)
West	−1.48	2.78	−2.19	0.49	−4.62
	(3.44)	(3.23)	(3.88)	(3.67)	(3.90)
Midwest	−5.51	0.97	2.11	5.32	−1.90
	(3.07)	(3.38)	(3.37)	(3.37)	(3.67)
Black non-Hispanic	−10.39*	−2.61	−13.42***	−0.47	−15.54***
	(4.56)	(4.00)	(3.98)	(4.28)	(3.72)
Asian non-Hispanic	−2.40	−3.28	−10.91**	2.55	−2.02
	(4.53)	(6.70)	(3.81)	(4.74)	(6.43)
Hispanic	−2.44	3.36	6.45	9.23*	−2.95
	(3.60)	(3.58)	(4.40)	(4.15)	(3.88)
High school	2.06	−12.96	9.57	−11.12	−2.57
	(5.68)	(7.04)	(6.03)	(6.28)	(6.30)
Some college	−1.99	−16.02*	−0.81	−7.26	1.04
	(5.61)	(7.31)	(5.94)	(6.76)	(6.03)
Bachelor's degree	−7.34	−5.60	6.74	−12.19	−5.11
	(5.75)	(7.63)	(6.31)	(6.72)	(6.17)
Master's degree or higher	−9.82	−16.86*	0.16	−15.12*	−3.76
	(5.91)	(7.42)	(6.28)	(6.79)	(6.58)
Not married	−5.16	−5.97	−2.43	−5.40	−5.29
	(3.99)	(4.06)	(4.77)	(4.56)	(4.72)
Never married	−1.91	−13.25**	−1.42	−6.91	−7.10
	(4.51)	(4.87)	(4.65)	(4.22)	(4.34)
Citizen	−5.34	−0.82	−5.22	1.72	−5.43
	(4.93)	(4.69)	(5.03)	(4.86)	(5.22)
Unemployed	24.80**	23.67**	25.19*	23.31**	15.40*
	(9.20)	(8.24)	(10.25)	(8.16)	(7.11)
Not in labor force	20.44***	36.79***	26.40***	22.45***	27.05***
	(4.56)	(5.57)	(4.67)	(5.04)	(5.35)
Tenure	0.56	1.77	−5.81	−5.78	1.96
	(3.54)	(3.22)	(3.67)	(3.69)	(3.36)
Housetype	1.82	2.48	−0.62	−15.20	−7.82
	(7.79)	(6.20)	(10.91)	(9.31)	(8.82)
Family income	3.01	−4.24	−3.42	−2.31	−4.40
	(3.40)	(3.20)	(3.35)	(3.71)	(3.84)
Weekend	11.85***	9.79***	14.25***	18.50***	17.80***
	(2.61)	(2.42)	(2.90)	(2.68)	(2.98)
Holiday	22.06*	−5.20	−8.95	2.84	9.00
	(10.51)	(5.38)	(9.17)	(11.17)	(9.05)
One child	2.19	−0.08	−1.71	0.96	1.30
	(2.87)	(2.64)	(2.81)	(2.88)	(3.12)
Two children	7.18	5.06	7.71	1.26	−4.35
	(4.22)	(4.55)	(4.83)	(4.44)	(4.35)
Three children	15.09*	−0.70	10.29	13.30	−1.40
	(6.98)	(6.33)	(6.44)	(7.51)	(6.38)
Child aged 0–5	−2.04	3.73	1.92	−0.21	5.36
	(3.60)	(3.61)	(4.27)	(3.70)	(4.08)
Child aged 6–12	−0.57	0.45	−2.86	0.49	5.08
	(3.71)	(3.49)	(3.93)	(3.75)	(3.85)
N	2859	2702	2304	2364	1924

Standard errors in parentheses.
*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Table B3. Weighted regression results for time spent on food preparation by year, among parents.

	2018	2019	2020	2021	2022
Intercept	12.64	19.70	21.68	5.67	42.21**
	(9.25)	(12.10)	(11.33)	(10.30)	(14.25)
Age	0.28*	0.07	0.23	0.10	0.11
	(0.14)	(0.16)	(0.15)	(0.16)	(0.16)
Age squared	−0.02	−0.04***	−0.01	−0.03**	−0.05***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Female	29.76***	26.48***	29.71***	31.05***	27.14***
	(2.32)	(2.28)	(2.32)	(2.61)	(2.53)
North	0.15	6.64	2.27	1.68	4.48
	(2.91)	(3.41)	(3.33)	(3.82)	(3.87)
West	−5.99*	2.81	0.69	−2.86	−2.22
	(2.79)	(3.05)	(2.90)	(3.12)	(3.26)
Midwest	−2.09	−0.28	2.48	0.69	−0.39
	(2.81)	(2.76)	(2.90)	(2.82)	(3.25)
Black non-Hispanic	−6.73	1.95	−9.87**	−2.37	3.82
	(3.95)	(4.03)	(3.76)	(3.87)	(5.37)
Asian non-Hispanic	14.08**	2.67	9.80*	11.01*	1.92
	(4.27)	(4.94)	(4.97)	(4.69)	(4.66)
Hispanic	1.82	2.74	2.16	4.17	3.06
	(3.19)	(3.50)	(3.26)	(3.55)	(3.47)
High school	0.61	6.53	2.25	13.61**	−10.11
	(4.81)	(5.19)	(4.41)	(4.89)	(6.46)
Some college	0.11	−0.93	−1.16	7.23	−8.16
	(4.76)	(4.92)	(4.41)	(4.30)	(6.46)
Bachelor's degree	−0.72	2.93	2.55	8.06	−7.75
	(4.95)	(5.38)	(4.78)	(4.45)	(6.76)
Master's degree or higher	−1.02	−1.76	2.84	7.10	−5.49
	(5.23)	(5.57)	(5.12)	(4.85)	(7.17)
Not married	−2.57	−2.76	−3.12	−1.73	−8.04
	(3.76)	(4.78)	(3.32)	(4.00)	(4.43)
Never married	−9.61*	−3.55	−15.46***	−7.16	−6.83
	(3.78)	(4.01)	(4.06)	(4.26)	(4.63)
Citizen	−5.12	−10.23*	−8.11*	−6.61	−7.72
	(3.83)	(4.47)	(4.08)	(4.78)	(4.69)
Unemployed	23.08***	25.30***	22.19**	44.68***	24.71***
	(6.59)	(7.27)	(7.72)	(8.45)	(7.30)
Not in labor force	19.08***	28.83***	20.65***	21.95***	28.43***
	(3.70)	(4.63)	(3.63)	(4.19)	(4.78)
Tenure	−4.39	2.40	−3.55	−3.47	−1.76
	(2.68)	(2.63)	(2.90)	(3.42)	(3.33)
Housetype	3.23	3.35	−5.48	−0.50	−6.15
	(4.45)	(6.19)	(5.87)	(5.93)	(7.67)
Family income	3.91	−1.92	−0.22	1.40	−0.39
	(2.63)	(2.78)	(2.81)	(3.34)	(3.35)
Weekend	3.20	5.20*	2.04	2.16	−0.97
	(1.97)	(2.17)	(2.17)	(2.16)	(2.51)
Holiday	14.81	27.19**	9.40	7.01	7.98
	(11.06)	(9.28)	(12.14)	(10.79)	(8.48)
One child	0.42	5.31*	2.19	6.86*	5.21
	(2.26)	(2.45)	(2.51)	(2.75)	(2.95)
Two children	3.79	2.12	6.85	13.03**	2.75
	(3.43)	(3.48)	(3.89)	(4.07)	(4.55)
Three children	8.70	10.58	6.66	9.91	3.43
	(5.65)	(5.48)	(5.27)	(6.24)	(5.97)
Child aged 0–5	2.84	4.28	7.35*	13.09***	2.51
	(3.13)	(3.61)	(3.30)	(3.22)	(3.99)
Child aged 6–12	−1.92	−2.78	2.70	8.94**	−3.80
	(2.92)	(3.33)	(3.28)	(2.88)	(3.65)
N	2859	2702	2304	2364	1924

Standard errors in parentheses.
*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Table B4. Weighted regression results for time spent on personal care by year, among parents.

	2018	2019	2020	2021	2022
Intercept	556.24***	566.19***	537.51***	541.83***	575.98***
	(29.76)	(32.40)	(41.05)	(38.36)	(33.95)
Age	−0.59	−0.61	−0.72	−0.66	−0.93*
	(0.40)	(0.44)	(0.48)	(0.49)	(0.44)
Age squared	0.01	0.05	0.07*	0.03	0.06
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Female	10.75	24.17***	14.61*	17.24**	25.83***
	(6.09)	(6.35)	(6.74)	(6.53)	(6.88)
North	2.45	−0.67	−2.49	−15.96	5.74
	(9.44)	(9.50)	(9.57)	(9.01)	(9.62)
West	−4.17	−12.18	−5.56	−9.30	11.52
	(7.73)	(8.48)	(8.48)	(8.64)	(9.45)
Midwest	−5.90	−7.67	−8.96	−6.57	−7.89
	(8.08)	(8.05)	(8.21)	(8.07)	(9.52)
Black non-Hispanic	−0.49	6.42	20.91	−9.92	34.62*
	(14.21)	(13.59)	(13.49)	(12.88)	(15.58)
Asian non-Hispanic	35.51**	16.42	32.24***	8.61	17.02
	(13.09)	(10.28)	(9.69)	(8.92)	(16.70)
Hispanic	7.70	16.57	12.09	13.32	6.15
	(8.73)	(10.91)	(10.21)	(9.22)	(9.65)
High school	−26.22*	−22.60	−15.37	−7.61	14.58
	(11.99)	(14.06)	(15.33)	(13.69)	(16.22)
Some college	−19.34	−32.81*	−3.71	−22.87	18.01
	(12.27)	(13.51)	(14.68)	(14.41)	(15.97)
Bachelor's degree	−21.28	−35.07*	−12.77	−20.52	15.20
	(12.55)	(14.31)	(15.69)	(13.81)	(15.84)
Master's degree or higher	−18.71	−46.56**	−16.90	−30.29*	9.91
	(12.92)	(14.31)	(15.71)	(14.11)	(16.88)
Not married	1.35	10.82	27.70**	21.61*	24.10*
	(8.58)	(11.11)	(10.02)	(10.44)	(11.96)
Never married	25.14*	−3.86	19.26	35.96**	29.80*
	(12.01)	(9.60)	(12.20)	(11.17)	(12.80)
Citizen	14.05	−24.04*	10.66	−13.77	−30.81*
	(13.91)	(11.73)	(11.50)	(10.47)	(13.10)
Unemployed	68.31***	30.77	50.02**	8.33	8.22
	(17.52)	(28.41)	(17.99)	(19.53)	(21.93)
Not in labor force	33.55***	49.09***	40.68***	34.91***	55.52***
	(9.20)	(9.78)	(9.97)	(10.57)	(11.25)
Tenure	12.99	−3.85	−5.08	0.58	−14.08
	(8.96)	(8.21)	(9.08)	(8.11)	(9.65)
Housetype	6.31	23.52	17.31	50.69*	−4.95
	(16.33)	(15.02)	(32.98)	(22.36)	(16.58)
Family income	−34.42***	5.68	−4.01	−2.17	−1.85
	(7.44)	(8.53)	(8.38)	(8.10)	(9.73)
Weekend	72.02***	68.04***	61.92***	58.65***	64.81***
	(5.59)	(6.05)	(6.41)	(6.06)	(6.83)
Holiday	67.04**	59.72*	40.54	57.83**	72.72**
	(21.91)	(24.96)	(23.06)	(18.80)	(25.29)
One child	6.51	−3.52	1.51	−9.76	2.43
	(6.92)	(6.60)	(7.55)	(7.16)	(9.11)
Two children	6.89	−8.27	−21.41*	−20.42*	−13.77
	(9.60)	(9.06)	(9.63)	(9.55)	(11.61)
Three children	10.55	−12.17	−21.35	−12.44	−19.09
	(14.37)	(14.36)	(15.27)	(13.41)	(15.08)
Child aged 0–5	−16.83	−10.42	−3.32	−10.25	−2.41
	(9.15)	(10.13)	(10.64)	(9.68)	(12.45)
Child aged 6–12	−12.86	5.86	0.23	−1.47	−6.01
	(8.78)	(9.98)	(9.47)	(9.01)	(12.19)
N	2859	2702	2304	2364	1924

Standard errors in parentheses.
*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Table B5. Weighted regression results for time spent on leisure and sports by year, among parents.

	2018	2019	2020	2021	2022
Intercept	217.80***	231.85***	277.35***	197.43***	245.03***
	(52.20)	(50.81)	(47.43)	(43.14)	(44.31)
Age	1.35*	1.10	0.44	0.33	−0.70
	(0.68)	(0.66)	(0.62)	(0.61)	(0.66)
Age squared	0.12*	0.03	0.10*	0.03	0.03
	(0.05)	(0.04)	(0.05)	(0.04)	(0.05)
Female	−44.26***	−57.22***	−63.88***	−31.96***	−25.21*
	(9.45)	(9.95)	(9.66)	(8.66)	(12.60)
North	2.02	13.71	−0.13	−5.77	−4.14
	(13.99)	(14.04)	(12.74)	(14.29)	(16.19)
West	11.46	31.40*	14.28	1.74	7.45
	(11.88)	(13.02)	(12.18)	(11.25)	(13.37)
Midwest	−0.43	21.81	13.78	6.43	0.73
	(11.09)	(12.36)	(12.23)	(10.10)	(13.23)
Black non-Hispanic	12.52	18.82	−23.13	6.39	−17.39
	(17.87)	(19.91)	(16.09)	(16.58)	(16.34)
Asian non-Hispanic	−41.53**	−27.95	−80.11***	−11.39	−2.20
	(14.52)	(21.48)	(15.95)	(15.38)	(38.88)
Hispanic	−17.13	−19.36	−18.01	0.99	−12.85
	(14.03)	(16.21)	(13.79)	(12.89)	(13.93)
High school	−7.10	−36.95	−52.72*	2.08	−7.27
	(19.73)	(23.11)	(21.84)	(16.68)	(21.14)
Some college	−10.16	−35.75	−57.63**	3.96	−37.88
	(19.46)	(23.99)	(20.97)	(17.80)	(21.33)
Bachelor's degree	−16.80	−56.57*	−28.01	−9.64	−34.71
	(19.27)	(24.19)	(21.95)	(17.12)	(21.66)
Master's degree or higher	−28.78	−50.15*	−32.68	−10.15	−38.16
	(19.68)	(25.28)	(22.36)	(18.12)	(23.14)
Not married	−3.73	18.92	−7.66	−12.54	−8.79
	(14.46)	(13.81)	(12.52)	(12.35)	(14.80)
Never married	24.73	46.17**	42.95*	21.81	22.75
	(14.79)	(16.85)	(17.04)	(14.05)	(17.72)
Citizen	3.09	31.00	7.66	19.75	20.06
	(17.40)	(18.19)	(16.23)	(14.41)	(17.84)
Unemployed	121.50***	95.29***	189.45***	133.95***	216.57***
	(24.68)	(23.22)	(35.51)	(34.15)	(42.32)
Not in labor force	107.61***	134.09***	114.61***	113.69***	39.15*
	(16.06)	(16.13)	(14.07)	(13.21)	(17.52)
Tenure	−7.41	−8.44	−1.76	−0.39	23.66
	(11.70)	(12.09)	(11.53)	(10.60)	(12.62)
Housetype	−41.46	−62.52	−31.17	−13.36	−10.01
	(30.32)	(37.78)	(21.93)	(29.82)	(22.08)
Family income	2.95	9.67	−4.36	3.26	−10.04
	(11.49)	(14.28)	(11.66)	(11.16)	(13.20)
Weekend	129.33***	122.47***	134.94***	137.67***	153.47***
	(8.90)	(8.85)	(9.34)	(8.60)	(10.60)
Holiday	133.28***	214.01***	77.36	101.08*	89.31*
	(34.52)	(42.09)	(46.76)	(51.46)	(39.39)
One child	−21.45*	4.15	−11.47	−13.36	−1.50
	(10.17)	(11.04)	(10.27)	(9.79)	(10.01)
Two children	−41.25**	−30.18*	5.33	−21.50	13.47
	(13.60)	(14.15)	(14.34)	(13.97)	(16.21)
Three children	−29.41	−7.29	−92.29***	−47.17*	44.72*
	(18.42)	(19.19)	(21.36)	(18.37)	(20.97)
Child aged 0–5	−22.93	−14.65	−31.80*	−35.11**	−43.63**
	(14.63)	(15.58)	(14.38)	(12.78)	(15.95)
Child aged 6–12	−0.63	−17.29	−1.30	−3.30	−22.64
	(14.16)	(13.58)	(13.69)	(12.57)	(15.32)
N	2859	2702	2304	2364	1924

Standard errors in parentheses.
*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Table B6. Weighted regression results for time spent on paid employment by year, among parents.

	2018	2019	2020	2021	2022
Intercept	477.76***	455.42***	375.65***	509.30***	379.82***
	(65.56)	(67.36)	(78.33)	(72.94)	(77.09)
Age	0.22	0.93	1.22	0.41	1.78
	(0.93)	(0.89)	(0.97)	(1.08)	(1.05)
Age squared	−0.16*	−0.16*	−0.20**	0.01	−0.09
	(0.07)	(0.06)	(0.07)	(0.07)	(0.08)
Female	−59.49***	−85.62***	−52.95***	−77.19***	−65.96***
	(12.90)	(13.26)	(15.07)	(13.17)	(14.15)
North	−28.00	−17.06	11.88	−7.71	19.76
	(18.81)	(21.25)	(21.07)	(20.41)	(19.13)
West	−44.90**	−37.83*	17.42	−19.48	−3.11
	(16.45)	(17.04)	(19.62)	(17.46)	(18.54)
Midwest	0.01	−2.36	10.90	−0.88	36.09
	(15.10)	(15.74)	(19.10)	(15.86)	(18.95)
Black non-Hispanic	−11.67	5.69	85.17**	30.44	−15.17
	(22.11)	(25.30)	(29.94)	(26.16)	(28.39)
Asian non-Hispanic	−5.99	9.70	65.42**	−21.13	−33.50
	(22.59)	(24.55)	(24.68)	(21.45)	(36.24)
Hispanic	16.71	20.76	8.55	−0.08	34.12
	(20.65)	(21.96)	(23.12)	(19.07)	(20.45)
High school	73.44*	50.33	49.56	39.25	18.91
	(29.72)	(31.08)	(39.07)	(34.57)	(31.11)
Some college	54.47	48.09	17.76	3.90	6.40
	(30.35)	(31.98)	(37.91)	(33.84)	(31.27)
Bachelor's degree	52.69	36.84	−11.57	32.43	−18.37
	(30.90)	(31.40)	(37.86)	(34.27)	(31.48)
Master's degree or higher	71.43*	60.86	−14.78	37.65	−2.17
	(31.75)	(32.23)	(38.80)	(34.38)	(32.07)
Not married	23.04	−8.87	−2.06	5.24	12.78
	(18.78)	(21.62)	(20.31)	(20.64)	(24.84)
Never married	−4.26	0.52	−22.15	−33.18	−20.12
	(22.23)	(23.45)	(30.50)	(25.64)	(22.20)
Citizen	7.76	33.08	23.75	6.76	−20.62
	(22.42)	(25.41)	(28.44)	(23.02)	(25.84)
Tenure	−40.27*	−33.38	−14.08	−1.29	−28.12
	(17.40)	(17.04)	(21.85)	(18.14)	(19.06)
Housetype	−8.61	−27.62	26.73	−25.30	57.17
	(40.92)	(41.52)	(55.06)	(34.41)	(43.75)
Family income	9.17	−15.93	−3.29	−12.24	13.92
	(16.68)	(19.01)	(19.91)	(18.60)	(20.33)
Weekend	−340.46***	−322.08***	−308.29***	−344.44***	−338.65***
	(11.43)	(11.71)	(13.90)	(12.10)	(13.32)
Holiday	−381.54***	−380.65***	−253.87***	−170.59	−268.31***
	(26.65)	(26.06)	(69.79)	(89.46)	(50.62)
One child	−0.65	1.20	1.63	7.96	3.92
	(13.54)	(14.73)	(16.09)	(14.87)	(15.73)
Two children	5.64	17.69	−14.32	4.22	0.65
	(19.42)	(19.50)	(24.25)	(21.39)	(23.03)
Three children	−29.92	−37.86	70.20	52.49	−53.36
	(20.83)	(24.99)	(47.49)	(33.31)	(36.60)
Child aged 0–5	11.00	6.58	−1.09	−26.19	16.59
	(18.41)	(20.24)	(22.36)	(18.49)	(20.61)
Child aged 6–12	−6.77	7.74	10.90	−24.55	9.18
	(18.27)	(18.81)	(20.37)	(17.56)	(20.81)
N	2371	2272	1853	1966	1617

Standard errors in parentheses.
*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Table B7. Weighted regression results for time spent on taking care of children by year, among parents.

	2018	2019	2020	2021	2022
Intercept	27.48*	19.88	44.48*	36.51**	16.04
	(12.92)	(12.05)	(18.04)	(14.15)	(15.17)
Age	−0.97***	−0.88***	−1.17***	−0.95***	−0.80***
	(0.18)	(0.17)	(0.22)	(0.22)	(0.19)
Age squared	−0.07***	−0.04**	−0.04*	−0.08***	−0.08***
	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)
Female	22.71***	21.40***	25.53***	22.69***	15.83***
	(3.05)	(2.88)	(3.70)	(3.16)	(3.31)
North	1.51	10.97**	5.60	10.07*	0.02
	(4.21)	(4.25)	(5.36)	(4.68)	(4.75)
West	−4.22	−1.09	4.26	0.77	−2.67
	(4.04)	(3.56)	(4.68)	(3.99)	(4.32)
Midwest	−2.58	3.34	0.98	7.73	−1.22
	(3.76)	(3.75)	(4.75)	(4.55)	(4.77)
Black non-Hispanic	−9.94	−6.18	−4.16	−15.09**	−1.01
	(5.32)	(4.79)	(7.69)	(5.54)	(7.08)
Asian non-Hispanic	−4.26	10.56	−5.54	3.76	0.91
	(5.40)	(6.35)	(7.21)	(6.53)	(6.71)
Hispanic	−7.74	−14.58***	−6.18	−11.82*	−11.68*
	(4.43)	(3.93)	(5.24)	(4.91)	(5.15)
High school	−0.21	20.58***	9.56	1.58	13.66*
	(6.28)	(5.17)	(7.52)	(6.35)	(5.65)
Some college	6.92	22.68***	5.86	11.94	20.99***
	(6.36)	(5.27)	(7.08)	(6.59)	(5.71)
Bachelor's degree	11.54	32.45***	27.94***	15.49*	36.40***
	(6.99)	(5.52)	(7.74)	(6.95)	(6.91)
Master's degree or higher	22.21**	38.58***	33.46***	26.12***	34.03***
	(7.34)	(5.78)	(8.52)	(7.39)	(6.82)
Not married	−5.40	−7.92	−7.04	−4.74	−0.10
	(4.94)	(4.51)	(4.88)	(5.87)	(5.55)
Never married	−18.29**	−21.66***	−23.37**	−15.18**	−11.14
	(5.67)	(5.29)	(7.25)	(5.51)	(5.74)
Citizen	7.20	−7.78	−6.29	2.14	4.72
	(5.53)	(4.88)	(6.63)	(5.33)	(5.49)
Unemployed	27.86**	15.04*	12.18	36.13***	37.03***
	(9.05)	(6.44)	(8.08)	(9.98)	(8.96)
Not in labor force	38.01***	13.74**	32.15***	31.85***	32.62***
	(5.00)	(5.15)	(5.40)	(5.25)	(6.20)
Tenure	4.80	1.21	−1.53	1.42	3.77
	(3.92)	(3.47)	(5.38)	(4.20)	(4.50)
Housetype	14.99	14.75*	6.57	−2.52	7.48
	(8.87)	(7.05)	(11.86)	(7.97)	(9.27)
Family income	−2.82	−0.29	−4.01	4.38	−1.75
	(3.56)	(3.59)	(4.80)	(4.16)	(4.58)
Weekend	−5.02	−3.55	−10.89**	0.93	−4.24
	(2.85)	(2.77)	(3.33)	(3.13)	(3.24)
Holiday	19.54	3.12	−1.30	−12.88	−11.91
	(19.26)	(9.13)	(16.25)	(12.53)	(8.91)
One child	5.41	5.06	0.53	−0.49	7.86
	(3.33)	(3.21)	(4.43)	(3.64)	(4.05)
Two children	1.48	13.33**	−1.69	9.29	−2.71
	(4.78)	(5.02)	(6.11)	(5.57)	(5.88)
Three children	5.37	15.30	−0.50	19.37*	−11.63
	(7.95)	(8.78)	(8.98)	(8.27)	(7.92)
Child aged 0–5	60.50***	60.17***	68.65***	69.04***	64.56***
	(4.10)	(3.92)	(4.70)	(4.32)	(4.46)
Child aged 6–12	25.74***	19.74***	29.39***	21.91***	26.61***
	(3.38)	(3.24)	(4.07)	(3.50)	(3.84)
N	2859	2702	2304	2364	1924

Standard errors in parentheses.
*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.