Brian Knop, U.S. Census Bureau, brian.michael.knop@census.gov

Lynda Laughlin, U.S. Census Bureau, lynda.l.laughlin@cesnsus.gov

When Work Isn't 9 to 5: Gender, Industry/Occupational Context and Nonstandard Work Schedules Among Parents

SEHSD Working Paper Number 2018-22

This paper reports results of research and analysis undertaken by U.S. Census Bureau staff. It has undergone more limited review than official publications and was released to inform interested parties of ongoing research and encourage discussion. Any views expressed are those of the authors and not necessarily those of the U.S. Census Bureau.

ABSTRACT

Using Wave 1 of the 2014 SIPP Panel, this paper aims to understand how the industrial and occupational context of parents' employment is associated with parents' likelihood of working nonstandard schedules. More specifically, we ask: How many mothers and fathers work a nonstandard schedule? In which industries and occupations are parents most likely to be working a nonstandard schedule? What organizational and work factors (e.g. size of organization, sex-segregation of occupation, union status) are associated with nonstandard schedules among parents? We find that nonstandard schedules are common among both mothers and fathers, though mothers in nonstandard schedules are more likely to be working part time. Parents in service industries and occupations are more likely to be working nonstandard schedules. We found that larger firm size is associated with nonstandard schedules for mothers, but not for fathers. Occupational gender composition was not associated with nonstandard schedules for mothers. This research highlights the challenges parents face in meeting the demands of work and family life in the context of labor market forces and the constraints presented by particular industries and occupations.

KEYWORDS

Work Schedule, Occupation, Parenthood, Children, Gender, Families

INTRODUCTION

Structural labor force changes in recent decades in both the temporal patterns of employment and women's participation in paid work have led to a greater diversity of workfamily arrangements. Fulfilling work and childrearing responsibilities has become more complex for families as the number of households in which both parents work outside the home has increased. As of 2016, 61 percent of married couple households with children contain dual earners (U.S. Census Bureau 2016), and the 24-hour economy has pushed more working adults into work schedules that fall outside traditional work hours (McMenamin 2007; Presser 1999). Coupled parents may use nonstandard work hours to "desynchronize" schedules so that one parent can participate in child care while the other is at work, avoiding the use of external child care and maximizing individual time spent with their children. However, there is evidence that some parents—especially those in low earning households—fall into nonstandard work schedules because of the nature and inflexibility of their job, not because of their own strategic organization of work-family demands (Lesnard 2008). Some jobs and work settings—such as retail work or hospitals—offer limited opportunities for a consistent daytime work schedule.

Nonstandard work refers to work that occurs outside the traditional daytime schedule, including evenings, nights, weekends, and rotating schedules. Parental nonstandard work can affect several aspects of family life. It has a negative association with early childhood development (Han 2005). For fathers, working a nonstandard work schedule is associated with less parent-child intimacy and less knowledge about their school-aged child's daily life (Davis, Crouter, and McHale 2006). However, as stated above, some parents may use nonstandard schedules in order to reduce or eliminate any overlapping work hours with their spouse or partner, allowing them to tag-team work and family demands (Taht and Mills 2012).

While nonstandard work schedules are becoming more frequent, they are still more likely to occur in some industries and occupations than others (Kalleberg, Reskin, and Hudson 2000). Therefore, it is important to examine specific occupations and industries as sources of variation in work schedules among parents.

Since the 1970s, there has been a shift in employment from industries that produce goods to those that produce services. The expansion of the service sector has had segregationenhancing effects, primarily because employers turned to non-employed wives and mothers as an alternative supply of labor to meet the demand (Charles & Grusky 2004). The growth of this sector may have also fueled the expansion of contingent and nonstandard work as workers, often women, search for flexibility to meet domestic demands (Kalleberg 2011; Presser 2003).

3

However as nonstandard scheduling has become more common in many service industries, a flexible schedule may be more of a requirement of the job than a choice of the employee, thus leading to various work-family challenges (Henly, Shaefer, and Waxman 2006; Presser 1995).

Nonstandard work schedules may also reinforce existing workplace norms at the occupational level (Kalleberg et al. 1997). Occupations held by men and women differ significantly as a consequence of occupational sex segregation (Weeden and Sorensen 2004). Mothers often reduce or change work hours to meet work and family demands, reinforcing gender inequality at home and at work. Children are a gendered time constraint: they have a larger impact on women's time than men's time (Bianchi et al. 2000).

This paper aims to understand how the industrial and occupational context of parents' employment is associated with parents' likelihood of working nonstandard schedules. More specifically, we ask: How many mothers and fathers work a nonstandard schedule? In which industries and occupations are parents most likely to work a nonstandard schedule? What organizational and work factors (e.g. size of organization, sex-segregation of occupation, union status) are associated with nonstandard schedules among parents?

DATA AND METHODS

Our analysis uses Wave 1 of the 2014 Survey of Income and Program Participation (SIPP).¹ The Survey of Income and Program Participation (SIPP) is a nationally representative

¹ The numbers in this report come from version 1.1 of the 2014 Wave 1 SIPP data. They may vary slightly from the numbers released in version 1.0. For more details about the differences between version 1.0 and 1.1, see the Release Notes on the SIPP website at $\frac{\text{https://www2.census.gov/programs-surveys/sipp/tech-documentation/2014/2014-wave1-releasenotes.pdf}$.

panel survey administered by the U.S. Census Bureau that collects information on the short-term dynamics of employment, income, household composition, eligibility, and participation in government assistance programs. It is a leading source of information on specific topics related to economic well-being, family dynamics, education, wealth and assets, health insurance, childcare, and food security. Each SIPP panel follows individuals for several years, providing monthly data that measure changes in household and family composition and economic circumstances over time.²

Respondents in the SIPP who are employed are asked to provide a best description of their current work schedule. Possible responses include daytime schedule, evening shift, night shift, rotating shift (that changes regularly), split shift (consistently two distinct periods each day), irregular schedule (one that changes day to day), and an "other" response category. They also report the days of the week they regularly work, including Saturdays and Sundays. These work schedule details allow us to analyze nonstandard schedules: those that fall outside the standard daytime and weekday hours.

We analyze the prevalence of parents who work a nonstandard schedule in their primary job. We use December 2013 as the reference month because it is the most recent month in the data. If a respondent worked more than one job, we chose the job with the highest average weekly hours as the primary job. A parent's primary job would be more likely to shape their family's schedule than a second or third job that supplements their income. We also focus on

² For more information about SIPP, please visit the SIPP website at <u>www.census.gov/sipp</u> and the SIPP Source and Accuracy statement at <u>https://www2.census.gov/programs-surveys/sipp/tech-documentation/source-accuracy-statements/2014/sipp-2014-source-and-accuracy-statement.pdf</u>

parents who have at least one child under 18 in the home, since a nonstandard parental work schedule would be less likely to affect the lives of non-residential or adult children.

Both occupation and industry are important determinants of nonstandard work schedules. We include 24 occupational categories and 11 major industrial groups.³ We also include additional employment characteristics of the parent: full time status, whether respondent works multiple jobs, as well as characteristics of the job: alternative work arrangement⁴ (e.g. selfemployed), firm size, union status, and level of occupational sex segregation.

The sex composition of the occupation is calculated from a far larger data set, the American Community Survey, to capture more occupational specificity not available from the relatively smaller SIPP sample, although both surveys are nationally representative⁵. The ratio of men to women in a detailed occupation is limited to full time, year-round workers to control for the number of hours worked. An occupation is considered male dominated if the percentage of women in the occupation is less than 30 percent (e.g. architecture and engineering, 14 percent women). Mixed occupations include those in which women comprise 30 to 69 percent of workers (e.g. food preparation and service, 46 percent women). Female dominated occupations are those in which women comprise 70 percent or more of the workforce (e.g. healthcare support, 85 percent women).

³ Occupation codes are based on the 2010 Standard Occupational Classification (SOC) system. Industry codes are based on the 2012 North American Industry Classification System (NAICS).

⁴ For each job, respondents are asked whether they work for an employer, are self-employed, or have some "other" work arrangement. We combine self-employed and other work arrangement to make an alternative work arrangements category.

⁵ For more information about ACS, visit the ACS website at <u>www.census.gov/programs-surveys/acs</u>.

RESULTS

Thirty-eight percent of employed parents and 29 percent of parents work a nonstandard schedule in their primary job (see Table 1)⁶. The most common type of nonstandard schedule consists of working weekend daytime hours (15 percent of employed parents), followed by an irregular schedule (11 percent of employed parents). Thirty-six percent of all fathers work a nonstandard schedule, compared to 24 percent of all mothers. This difference is less pronounced when the comparison is limited to *working* fathers and *working* mothers. Forty percent of employed fathers work a nonstandard schedule, compared to 36 percent of employed mothers. There are some differences between employed women and men when comparing the prevalence of each type of nonstandard schedule individually: 4 percent of employed fathers work on weekends, compared to 12 percent of employed mothers.

To further analyze potential gender differences in nonstandard work schedules among parents, we compare the percent of full-time workers among mothers and fathers who have standard and nonstandard schedules (see Table 2). Eighty-six percent of fathers with nonstandard schedules work full time, and 94 percent of fathers with standard schedules work full time. Among mothers, 79 percent of those working standard schedules held a full-time job, compared to 54 percent of mothers with nonstandard schedules.

We next turn to the link between type of work and likelihood of having a nonstandard schedule among parents. The percent of parents who work a nonstandard schedule varies by industry, from 78 percent of parents working in arts, entertainment, recreation, and

⁶ All comparisons are statistically significant at the 0.10 level of significance

accommodation and food services, to 21 percent of parents who work in finance and insurance, real estate, rental, and leasing (see Table 3). The occupations with the highest percentage of parents working nonstandard schedules is food preparation and serving (78 percent) (see Table 3). The occupations with the lowest percentage of parents working nonstandard schedules are computer and mathematical (11 percent) and architecture and engineering (11 percent)⁷.

In order to account for both individual and work-related factors, we ran logistic regressions predicting the odds that a parent works a nonstandard schedule. We use survey and replicate weights to account for the survey design and varying coverage rates across different subpopulations.⁸ Table 4 shows the results for mothers and fathers, separately.

Black, non-Hispanic fathers have 73 percent higher odds of working a nonstandard schedule compared to White, non-Hispanic fathers. Black, non-Hispanic mothers have 30 percent higher odds and Asian, non-Hispanic mothers have 64 percent higher odds of working a nonstandard schedule compared to White, non-Hispanic mothers.

Among the educational attainment levels shown, only fathers with a college degree differ from those with a high school degree (the reference group): odds of working a nonstandard schedule are 51 percent lower among college educated fathers.

Among mothers, both college degree holders and those with some college differ from the reference group. Mothers with some college and those with a college degree have 30 percent

⁷ Neither computer and mathematical occupations nor architecture and engineering occupations differ significantly from life, physical, and social science; legal; and education, training, and library occupations.
 ⁸ For more information about weighting in SIPP, visit <u>https://www.census.gov/programs-</u>

<u>surveys/sipp/methodology/weighting.html</u>. For more information a bout SIPP sampling error, visit <u>https://www.census.gov/programs-surveys/sipp/methodology/sampling-error.html</u>

and 60 percent lower odds of working a nonstandard schedule, respectively. Poverty status is not associated with working a nonstandard for mothers or fathers.

Parents' work schedules are associated with the presence of a partner, whether that partner works, and that partner's work schedule. Fathers with a partner who does not work have a 34 percent higher odds of working a nonstandard schedule compared to fathers with a partner who works a regular daytime schedule. Having a partner who works a nonstandard schedule is associated with 50 percent higher odds of working a nonstandard schedule among fathers (compared to fathers with a partner working a standard schedule). A similar pattern exists for mothers: those with a non-working partner have 45 percent higher odds, and those with a partner working a nonstandard schedule have 34 percent higher odds of working a nonstandard schedule, themselves (compared to mothers with a partner working a regular daytime schedule). Additionally, mothers who do not have a spouse or cohabiting partner have a 34 percent higher odds of working a nonstandard schedule compared to mothers with a partner who works a standard schedule. The presence of a preschool-aged child (compared with only children age 6-17) is not associated with work schedule for mothers or fathers.

For all parents, working full time is associated with lower odds of having a nonstandard schedule. Having multiple jobs is associated with higher odds (roughly double) of having a nonstandard schedule for both mothers and fathers. Working an alternative work arrangement (either self-employed or "other" arrangement that does not include an employer) is associated with a higher odds of working a nonstandard schedule among both mothers (3.5 times higher) and fathers (3.9 times higher). Among fathers, being in a union or covered by a union contract at one's job is associated with odds of working a nonstandard schedule that are 80 percent higher.

9

Occupational sex segregation is not associated with work schedule for mothers or fathers. The likelihood of working a nonstandard schedule does not differ between parents in a maledominated occupation and those in a mixed representation or female-dominated occupation. Size of firm is associated with working a nonstandard schedule, but only for mothers. Mothers who work in a large firm (over 500 employees) are more likely to have a nonstandard schedule compared to those in smaller firms.

The type of industry in which the parent is primarily employed is associated with different nonstandard schedule outcomes. For both mothers and fathers, working in service related industries (retail trade; arts, entertainment, recreation, and accommodation and food services) are associated with much higher odds of working a nonstandard schedule. Those working in transportation and warehousing, and "other" services also had higher odds of working a nonstandard schedule (reference category: manufacturing industry). Additionally, fathers who are employed in agriculture have higher odds of working a nonstandard schedule, and fathers working in construction and finance industries have a lower odds of working a nonstandard schedule.

CONCLUSION

This paper analyzed links between gender, type of work, and parental work schedules. Nonstandard work schedules are common among both mothers and fathers. Mothers who work nonstandard schedules are more often part time workers than fathers with the same schedule. The high prevalence of part time hours among mothers with nonstandard work schedules

10

coincides with the notion that they shape work schedules around childcare needs more often than fathers.⁹

While parents in dual income households may use nonstandard schedules to "tag team" parent, allowing one parent to be home during the day and the other home in the evenings and nights, we do not find evidence of this in the data. Parents with a spouse or partner who works a nonstandard work schedule were more likely to work a nonstandard schedule. However, even though we didn't find a pattern of one parent working standard hours while the other works nonstandard hours, it's possible that families with two parents working nonstandard schedules still desynchronize their schedules for childcare purposes. For example, one parent may work a rotating schedule during daytime hours, while the other parent works nights.

Male-dominated and female-dominated occupations tend to vary greatly. However, we found no association between occupational sex segregation and the likelihood of working a nonstandard schedule among parents. This finding parallels research that shows a weak association between occupational gender composition and men's and women's use of sick leave from work (Mastekaasa 2005). While occupational sex segregation was not associated with nonstandard work, the gender composition of one's workplace may have an association with scheduling, though that information is not available in SIPP.

Larger firms are associated with an increased likelihood of working a nonstandard schedule, but only for mothers. Firms with large operations may present the need for a wider variety of work schedules. Or, they may offer greater choice in work schedules than do smaller firms. It is unclear why firm size is not associated with a nonstandard schedule among fathers.

⁹ For more analysis of gender differences in reasons for working a nonstandard schedule, see: https://www.census.gov/library/working-papers/2017/demo/parents-working-nonstandard-schedules.html

The association between union status and nonstandard schedules was also gender specific: fathers who were unionized or worked in a job covered by a union contract were more likely to work a nonstandard schedule. This may have to do with the type of work found in maledominated unionized jobs (e.g. transportation), rather than union status causing fathers to work nonstandard hours.

This research highlights the challenges parents face in meeting the demands of work and family life in the context of labor market forces and the constraints presented by particular industries and occupations. As employment continues to shift towards service-based industries, where nonstandard work is most prevalent, families will increasingly need to account for parental work schedules that do not always involve regular daytime hours.

Table 1. Percent of Parents Working a Nonstandard Schedule

	Percent of			Percent of	Percent of	
	Percent of	Working	Percent of	Working	Percent of	Working
	Parents	Parents	Fathers	Fathers	Mothers	Mothers
Primary Job is a Nonstandard						
Schedule	28.9	38.2	35.9	40.4	23.5	35.9
Nights	2.5	3.3	3.1	3.5	2.0	3.0
Evenings	3.3	4.3	3.4	3.8	3.1	4.8
Split	0.6	0.8	0.6	0.6	0.6	0.9
Rotating	2.7	3.5	3.1	3.5	2.3	3.5
Irregular	8.1	10.7	9.8	11.0	6.8	10.3
Weekends	11.0	14.5	14.9	16.8	7.9	12.1
Other	0.9	1.2	1.0	1.1	0.8	1.3

Source: U.S. Census Bureau, Survey of Income and Program Participation, 2014 Panel, Wave 1

Note: Universe is parents residing with at least one child under 18 years old

	Percent Working Fulltime			
Fathers				
Standard schedule	93.8			
Nonstandard schedule	85.8			
Mothers				
Standard schedule	78.5			
Nonstandard schedule	53.9			
Source: U.S. Census Bureau, Survey of Income and				
Program Participation, 2014 Panel, Wave 1				

Table 2. Percent of Parents Working Full-Time by Work Schedule and Sex

Table 3. Percent of Parent	s Working	Nonstandard	Schedule	by	Industry	and	Occupation
----------------------------	-----------	-------------	----------	----	----------	-----	------------

	Percent Parents
	Working
	Nonstandard
Industry	Schedule
Arts, entertainment, recreation, and accommodation and food services	77.8
Agriculture, forestry, fishing, hunting, and mining	60.7
Retail trade	60.7
Other services, except public administration	56.6
Transportation and warehousing and utilities	54.7
Wholesale trade	33.0
Public administration	32.5
Construction	31.9
Manufacturing	31.6
Educational services, and health care and social assistance	29.3
Information	29.0
Professional scientific management administrative and waste management	
services	28.7
Finance and insurance, real estate, rental and leasing	20.7
Occupation	
Food preparation and serving related	77.8
Protective service	66.4
Farming, fishing, and forestry	65.5
Transportation	61.8
Personal care and service	61.3
Sales and related	56.9
Material moving	52.7
Healthcare support	50.5
Building and grounds cleaning and maintenance	50.3
Healthcare practitioners and Technical	48.7
Arts, design, entertainment, sports, and media	46.0
Production	41.1
Installation, maintenance, and repair	40.3
Construction and extraction	32.3
Management	31.8
Community and social service	28.5
Military	26.0

Office and administrative support	24.8
Legal	16.9
Life, physical, and social science	16.3
Business and financial operations	15.6
Education, training, and library	13.3
Architecture and engineering	11.0
Computer and mathematical	10.5
Source: U.S. Census Bureau, Survey of Income and Program Participation, 2014 Panel, Wave	L

16

	Fathers Odds	Mothers Odds
	Ratios	Ratios
Age	1.00	0.98***
Race/Ethnicity		
White Alone, non-Hispanic (reference)		
Black Alone, non-Hispanic	1.73***	1.30*
Asian Alone, non-Hispanic	0.98	1.64**
Other Race, non-Hispanic	1.14	1.02
Hispanic Origin (of any race)	1.12	0.97
Educational Attainment		
Less Than High School	0.95	1.25
High School Diploma or Equivalent (reference)		
Some College, No Degree	1.01	0.70***
College Degree	0.49***	0.40***
At or Below Poverty	1.13	0.96
Partner Work Status		
No Spouse/Partner	1.20	1.34**
Spouse/Partner Does Not Work	1.34***	1.45*
Spouse/Partner Works Standard Schedule (reference)		
Spouse/Partner Works Nonstandard Schedule	1.50***	1.34**
Presence of Child Under 5	0.95	1.15
Fulltime Worker	0.57***	0.38***
Works Multiple Jobs	1.90***	2.19***
Union Job	1.80***	0.94
Alternative Work Arrangement (e.g. self-employed)	3.91***	3.54***
Occupational Sex Segregation		
Male Dominated (reference)		
Mixed Representation	1.00	1.02
Female Dominated	0.80	0.82
Size of Firm		
Less than 10	0.98	0.50***
10 to 100	1.05	0.53***
101 to 500	0.98	0.68**
Over 500 (reference)		
Industry Type		
Agriculture	2.93***	1.71
Construction	0.61***	0.53
Manufacturing (reference)		

Table 4. Odds Ratios Predicting Working a Nonstandard Schedule, Among Working Parents with Children Under 18

Wholesale Trade	1.16	0.89
Retail Trade	2.87***	4.10***
Transportation and Warehousing	2.09***	2.14**
Information	0.87	1.87
Finance	0.53**	1.03
Professional Scientific Management	0.90	0.88
Educational Services, and Health Care and Social		
Assistance	1.15	1.43
Arts and Entertainment	8.02***	6.28***
Public Administration	1.30	1.14
Other Services	1.77**	2.79***
~		

Source: U.S. Census Bureau, Survey of Income and Program Participation, 2014Panel, Wave 1

Note: *p<0.05, **p<0.01, ***p<0.001

Figure 1



Parents Working a Nonstandard Schedule

Source: U.S. Census Bureau, Survey of Income and Program Participation, 2014 Panel, Wave $1\,$

Note: Split shifts and "other" category omitted from figure

Figure 2



Source: U.S. Census Bureau, Survey of Income and Program Participation, 2014 Panel, Wave 1

Figure 3



Source: U.S. Census Bureau, Survey of Income and Program Participation, 2014 Panel, Wave 1



Percent of Parents Working Nonstandard Schedule by Industry Groups

Source: U.S. Census Bureau, Survey of Income and Program Participation, 2014 Panel, Wave 1

REFERENCES

- Bianchi, Susan, Melissa Milkie, Liana Sayer, and John Robinson. 2000. "Is Anyone Doing Housework? Trends in the Gender Division of Household Labor." Social Forces 79:191-228.
- Charles, Maria, and David B. Grusky. 2004. Occupational Ghettos. Stanford, Calif.: Stanford University Press.
- Davis, Kelly D., Ann C. Crouter, and Susan M. McHale. 2006. "Implications of Shift Work for Parent-Adolescent Relationships in Dual-Earner Families." *Family Relations* 55, no. 4: 450-460.
- Han, Wen-Jui. 2005. "Maternal nonstandard work schedules and child cognitive outcomes." *Child Development* 76, no. 1: 137-154.
- Henly, Julia, Luke Shaefer, and Elaine Waxman. 2006. "Nonstandard work schedules: Employer-and employee-driven flexibility in retail jobs." Social Service Review, 80(4), 609-634.
- Kalleberg, Arne. 2010. Good Jobs, Bad Jobs. New York, NY: Russell Sage.
- Kalleberg, Arne L., Barbara F. Reskin, and Ken Hudson. 2000. "Bad Jobs in America: Standard and Nonstandard Employment Relations and Job Quality in the United States" *American Sociological Review* 65, no. 2:256-278.
- Kalleberg, Arne L., Edith Rasell, Naomi Cassirer, Barbara F. Reskin, Ken Hudson, David Webster, Eileen Appelbaum, and Roberta M. Spalter-Roth. 1997. Nonstandard Work, Substandard Jobs. Flexible work arrangements in the US. Economic Policy Institute, 1660 L Street NW, Suite 1200, Washington, DC 20036.
- Lesnard, Laurent. 2008. "Off-Scheduling within Dual-Earner Couples: An Unequal and Negative Externality for Family Time." *American Journal of Sociology* 114, no. 2: 447-490.
- Mastekaasa, Arne. 2005. "Sickness absence in female-and male-dominated occupations and workplaces." *Social science & medicine*, 60(10), 2261-2272.
- McMenamin, Terence M. 2007. "A time to work: recent trends in shift work and flexible schedules." Monthly Labor Review.
- Presser, Harriet B. 1995. "Job, family, and gender: Determinants of nonstandard work schedules among employed Americans in 1991." Demography 32, no. 4: 577-598.

Presser, Harriet B. 1999. "Toward a 24-hour economy." Science 284, no. 5421: 1778-1779.

Presser, Harriet B. 2003. Working in a 24/7 Economy. New York: Russell Sage Foundation.

- Taht, Kadri, and Melinda Mills. 2012. "Nonstandard Work Schedules, Couple Desynchronization, and Parent-Child Interaction." *Journal of Family Issues* Vol 33, no 8: 1054-1087.
- U.S. Census Bureau. 2016. Table FG1: Married Couple Family Groups, by Labor Force Status of Both Spouses: 2015. America's Families and Living Arrangements: 2015. U.S. Census Bureau, Housing and Household Economic Statistics Division, Fertility & Family Statistics Branch. Available online at https://www2.census.gov/programs-surveys/demo/tables/families/2016/cps-2016/tabfg1-all.xls
- Weeden, Kim, and Jesper Sorensen. 2004. "A framework for analyzing industrial and occupational sex segregation in the United States." Occupational ghettos: The worldwide segregation of women and men, pp.245-296.