



Questions and Answers about Shift Work: A Sloan Work and Family Research Network Fact Sheet

Introduction

The Sloan Work and Family Research Network has prepared Fact Sheets that provide statistical answers to some important questions about work–family and work–life issues. This Fact Sheet includes statistics about Shift Work. (Last updated: September 2009)



How common is shift work?

- ✔ **Fact 1** “In 2005, over 3 million full–time workers worked something other than a regular daytime schedule, with two–thirds of them working a rotating or irregular shift” (Williams, 2008, p. 14).
- ✔ **Fact 2** “One in five employees in the United States works mostly at nonstandard times—during the evening, at night, or on rotating shifts—and one in three works on the weekend” (Gornick, Presser, & Batzdorf, 2009, p. 1).
- ✔ **Fact 3** “Jointly, two–fifths of Americans work a nondaytime schedule and/or weekends” (Presser, 2003, p. 417).
- ✔ **Fact 4** “Shift work affects more than one employee in five [in Europe]” (Le Bihan & Martin, 2004, p. 567).
- ✔ **Fact 5** “In 2005, approximately 28% (4.1 million) of the 14.6 million employed Canadians worked something other than a regular day shift; the vast majority (82%) worked full time (30 or more hours per week)” (Williams, 2008, p. 5).
- ✔ **Fact 6** ““The most common alternate shift, the evening shift, with usual hours between 2 p.m. and midnight, accounted for 6.8 percent of all wage and salary workers” (McMenamin, 2007, p. 9).



Who does shift work?

- ✔ **Fact 1** Almost one–third (27.5%) of extended–hours companies reported an increase in the number of female shift workers, 19.8% reported an increase in college graduates, 11.2% reported an increase in Hispanics, 13.2% reported an increase in other ethnic groups, 10.9% reported an increase in high school graduates, and 2.5% saw an increase in shift workers over age 65 (Aguirre & Kerin, 2004, p. 64, Figure 46)



- ✔ **Fact 2** “In 2005, about 37% of full-time shift workers were women, up from about 33% in 1992” (Williams, 2008, p. 14).
- ✔ **Fact 3** In 2005, “women made up approximately 37% of all full-time shift workers, [and] almost 7 in 10 part-time shift workers were women” (Williams, 2008, p. 5).
- ✔ **Fact 4** In 2005, “fewer women worked irregular shifts (25% vs. 35% for men), but they were more likely to work rotating shifts (41% vs. 34%) or evening shifts (14% vs. 10%)” (Williams, 2008, p. 7).
- ✔ **Fact 5** “Males are more likely than females to work weekends (35.0% and 27.9%, respectively), and this higher likelihood holds for all race-ethnic groups” (Presser, 2003, p. 420).
- ✔ **Fact 6** (Gornick et al., 2009).

THE LATE SHIFT

These eight occupations are projected to grow the most from 2004 to 2014. Their hours are heavily nonstandard, and their workers are mainly female.

RANK & OCCUPATION	projected growth (in 1,000s)	nonstandard-hour workers as % of employees	women as % of employees
1 retail salespersons	+ 736	70.2%	50.2%
2 registered nurses	+ 703	59.5	92.5
3 post-secondary teachers	+ 524	29.0	43.4
4 customer-service representatives	+ 471	36.9	69.4
5 janitors and cleaners	+ 440	53.3	34.2
6 waiters/waitresses	+ 376	89.0	71.9
7 food preparers/servers	+ 367	81.7	69.8
8 home health aides	+350	70.3	90.0

SOURCE: UNPUBLISHED RESULTS BY PRESSER, BASED ON DATA FROM 2004 CURRENT POP. SURVEY & FROM THE BUREAU OF LABOR STATISTICS

- ✔ **Fact 7** In 2004, “16.7 percent of whites, 17.9 percent of Asians, and 18.1 percent of Hispanics worked alternate shifts” (McMenamin, 2007, p. 10).
- ✔ **Fact 8** “Whereas 19.0% of non-Hispanic Whites work other than a fixed day shift, 24.8% of non-Hispanic Blacks do so. Hispanics are in the middle with 21.1% and *other* [American Indian, Aleut, Eskimo, Asian, Pacific Islander, and all others] is 21.8%” (Presser, 2003, p. 417).
- ✔ **Fact 9** “...it is non-Hispanic Black men who are much more likely to work nonday shifts (28.2%) than are non-Hispanic White men (20.0%), Hispanics (22.5%), or *others* [American Indian, Aleut, Eskimo, Asian, Pacific Islander, and all others] (21.2%)” (Presser, 2003, p. 417).



✔ **Fact 10** Of the people surveyed who work on Saturdays and Sundays, "...the *other* group [American Indian, Aleut, Eskimo, Asian, Pacific Islander, and all others] has the highest percentage working weekends (36.8%) and non-Hispanic Blacks the smallest (30.0%)" (Presser, 2003, p. 420).



How do shift workers vary from day workers?

✔ **Fact 1** "Full-time shift workers were less likely to be married than their regular day counterparts. While about 7 in 10 day workers were married (with or without children), only about 6 in 10 shift workers were married. Shift workers were more likely to be single—3 in 10 shift workers were single compared with 2 in 10 of those working a regular day schedule" (Williams, 2008, p. 7).

✔ **Fact 2** "The average age of a full-time shift worker was about 38, compared with 41 for full-time day workers" (Williams, 2008, p. 7).

✔ **Fact 3** "About 22% of families with a parent working evening shifts had children compared with about 30% of day workers" (Williams, 2008, p. 7).



Why do people work a shift-work schedule?

✔ **Fact 1** "Many of those who worked night and evening shifts chose such schedules due to personal preference (21.0 and 15.9 percent, respectively) or because these shifts facilitated better arrangements for family or child care (15.9 and 11.0 percent, respectively)" (Bureau of Labor Statistics, 2005, p. 3).

✔ **Fact 2** "Over half (54.6 percent) of those working an alternative shift did so because it was the 'nature of the job'" (Bureau of Labor Statistics, 2005, p. 3).

✔ **Fact 3** "...we see, as expected, higher percentages of both fathers and mothers reporting child care as the main reason for working [nonstandard] schedules, although mothers clearly are far more likely to report such reasons (29.9% vs. 6.0%)" (Presser, 2003, p. 426).

✔ **Fact 4** "Primary among the reasons... to work alternate shifts... reported by part-time workers was 'allows time for school' (40.2 percent). Other reasons commonly cited included 'nature of the job' (33.5 percent), 'better arrangements for family or childcare' (9.0 percent), and 'could not get any other job' (6.1 percent)" (McMenamin, 2007, p. 9).

✔ **Fact 5** "The care of other family members is the second largest personal-familial reason for mothers (9.7% vs. 2.9% for fathers)... to work nonstandard hours (Presser, 2003, p. 426). [Personal-familial reasons for shift work include "care of family members," "better pay," "time for school," and "easier commute," among others.]



- ✔ **Fact 6** “Other reasons for working a non–daytime schedule included ‘personal preference’ (11.5 percent), ‘better arrangements for family or child care’ (8.2 percent), ‘could not get any other job’ (8.1 percent), and ‘better pay’ (6.8 percent)” (Bureau of Labor Statistics, 2005, p. 3).
- ✔ **Fact 7** “...better pay was given as the main reason for working nonstandard hours by only 5.1%” (Presser, 2003, p. 433).
- ✔ **Fact 8** “...Job–constraining reasons characterize 71.3% of all fathers [who do shift work], with the other group showing the lowest frequency [of job–constraining reasons] (65.3%), and only small differences among the *other* race–ethnic groups” (Presser, 2003, p. 426). [Job–constraining reasons for shift work include “could not get any other job,” “mandated by employer,” and “nature of job,” among others.]
- ✔ **Fact 9** “...men are substantially more likely than women to give job–constraining reasons: 68.7% and 54.2%, respectively” (Presser, 2003, p. 422).
- ✔ **Fact 10** “Among men working nonstandard hours, Hispanics are most likely to report job–constraining reasons (71.4%); among women working nonstandard hours, non–Hispanic Blacks are most likely to report job–constraining reasons (57.6%)” (Presser, 2003, p. 422).



Are workers satisfied with shift–work schedules?

- ✔ **Fact 1** “Almost 73% of rotating shift workers were satisfied with their work–life balance. The least satisfied were those with split or irregular shifts (about 65% were satisfied), on call or casual (62%), or with other shifts (63%)—those workers with the least control of their work schedules” (Williams, 2008, p. 8).



What are the difficulties of shift work?

- ✔ **Fact 1** “Ten percent of [extended–hours] facilities have severe fatigue problems, and 51% report moderate problems, up from 40% last year” (Aguirre & Kerin, 2004, p. 29).
- ✔ **Fact 2** To try to find time to accomplish more in a day, “just over half of all day workers cut back on sleep compared with 70% of evening shift workers and 63% of rotating shift workers” (Williams, 2008, p. 10).
- ✔ **Fact 3** “Daytime workers averaged just over 8 hours of sleep, while regular night shift workers had about 45 minutes less” (Williams, 2008, p. 12).
- ✔ **Fact 4** “More than one–third of [extended–hours] facilities (37%) have no limit on the maximum number of consecutive days worked. The same percentage (37%) allows a maximum of 4 to 7 consecutive work days” (Aguirre & Kerin, 2004, p. 72).



✔ **Fact 5** “Almost one wage-earner in two (47 percent) works at least one Saturday a month and almost a quarter at least one Sunday” (Le Bihan & Martin, 2004, p. 567).



How does shift work affect family life?

✔ **Fact 1** “In 2005, night shift workers spent 4.4 hours per day with their children—about 30 minutes per day more than day workers—and they spent 3.3 hours with their spouse—just over 1 hour less than day workers” (Williams, 2008, p. 11).

✔ **Fact 2** “Evening shift workers spent an average of 4.2 hours per day with their children—about 18 minutes more than day workers—but they spent less time with their spouse than day workers (about 1 hour less)” (Williams, 2008, p. 12).

✔ **Fact 3** “Shift workers were more likely than their day worker counterparts to worry about not spending enough time with family or friends (56% vs. 51%)” (Williams, 2008, p. 10).

✔ **Fact 4** “While women in general had a higher incidence of work-life imbalance (27% vs. 19%) and role overload (32% vs. 23%), they showed no significant differences by shift type” (Williams, 2008, p. 11).

✔ **Fact 5** “For men, shift workers were more likely to be dissatisfied with their work-life balance (29%) than those working a regular day schedule (19%)” (Williams, 2008, p. 11).

✔ **Fact 6** “While 28% of men working shifts had high role overload, only 23% of their day worker counterparts experienced high levels” (Williams, 2008, p. 11).

✔ **Fact 7** “Male shift workers were about 25% less likely than day workers to be satisfied with their work-life balance. However, shift work was not a significant predictor in the work-life balance model for women” (Williams, 2008, p. 12).

✔ **Fact 8** “Although a large majority reported high FS [family satisfaction], the percentage was lower for those working nonstandard, nonflexible shifts...The overall percentage for FS was 69%; the percentages among people working the evening, night, and rotating shifts and reporting FS were 56%, 54%, and 63%, respectively” (Grosswald, 2004, p. 417).

✔ **Fact 9** “...people who preferred fewer work hours than their job imposed were only two thirds as likely to report FS [family satisfaction] as those who wished to continue working the same number of hours as they already did” (Grosswald, 2004, p. 418).



In which industries is shift work prevalent?

- ✔ **Fact 1** “The prevalence of shift work was greatest among workers in service occupations, such as protective service (50.6 percent)—which includes police, firefighters, and guards—and food preparation and serving (40.4 percent) and among those employed in production, transportation, and material moving occupations (26.2 percent)” (Bureau of Labor Statistics, 2005, p. 3).
- ✔ **Fact 2** “The proportion of workers on alternative shifts was highest in leisure and hospitality industries (38.3 percent), mining (31.9 percent), and transportation and utilities (27.9 percent)” (Bureau of Labor Statistics, 2005, p. 3).
- ✔ **Fact 3** “Industry groups with large portions of employees who work alternate shifts include arts, entertainment, and recreation (33.0 percent), mining (31.5 percent), and transportation and warehousing (31.5 percent)” (McMenamin, 2007, p. 9).
- ✔ **Fact 4** “For women working nonstandard hours, the most common occupation is cashier (8.0%); for men, it is truck driver (6.8%)” (Presser, 2003, p. 431).
- ✔ **Fact 5** “Shift work was less prevalent in professional and business services (7.8 percent), financial activities (5.4 percent), and lowest in construction (2.9 percent)” (Bureau of Labor Statistics, 2005, p. 3).
- ✔ **Fact 6** “Alternative shifts were least common among management, professional, and related occupations (7.6 percent) and workers in natural resources, construction, and maintenance occupations (7.5 percent)” (Bureau of Labor Statistics, 2005, p. 3).



How does shift work affect turnover?

- ✔ **Fact 1** When a shift worker’s schedule is mandated by corporate managers, turnover is 16%; when mandated by facility managers, it is 11%; when mandated by shift supervisors, it is 10%; when chosen by employees or union, turnover is 7% (Aguirre & Kerin, 2004, p. 23, Figure 17).
- ✔ **Fact 2** Turnover in facilities where respondents were not sure if there was shift-worker lifestyle training, turnover was 15%; in facilities that had no shift-worker training, turnover was 11%; in facilities that provided training to shift workers, turnover was 8%; and in facilities that provided training to shift workers and their families, turnover was 3% (Aguirre & Kerin, 2004, p. 22, Figure 16)
- ✔ **Fact 3** “The average turnover in [extended-hours] facilities using EAPs [employee assistance programs] was 8.6%, compared to 11.2% in those that did not use them” (Aguirre & Kerin, 2004, p. 19).



What work–life supports do companies with extended hours provide?

- ✓ **Fact 1** “Only about 20% of evening shift workers and less than 12% of night shift workers had flexible work arrangements, but over 50% of those who worked irregular, on–call or casual shifts had flexible schedules” (Williams, 2008, p. 11).
- ✓ **Fact 2** To improve health of employees and reduce cost, 61% of extended–hours companies offer EAPs, 35% offer health–promotion programs, 31% offer periodic medical exams, 24% offer health risk assessments, 12% offer disease–management programs, and 14% offer other programs (Aguirre & Kerin, 2004, p. 38, Figure 30).
- ✓ **Fact 3** Almost one–third (27%) of extended–hours companies have changed health benefits to match demographic changes, 8% have changed dependent–care benefits, 8% have changed flextime benefits, 13% have changed diversity training, and 18% have changed job training (Aguirre & Kerin, 2004, p. 65, Figure 47).
- ✓ **Fact 4** “The percentage of [extended–hours] companies offering EAPs [employee assistance programs] grew from 46% in 2003 to 50% in 2004” (Aguirre & Kerin, 2004, p. 19).
- ✓ **Fact 5** “When asked about specific changes made in the [extended–hours] company related to the aging workforce, 50% of respondents noted no changes, 31% succession planning, 13% HR [human resources] policy changes, and 8% job sharing” (Aguirre & Kerin, 2004, p. 62).

The Network has additional resources related to this topic.

1. Visit a topic page on Shift Work at: <http://wfnetwork.bc.edu/topic.php?id=24>
Topic pages provide resources and information, including statistics, definitions, overviews & briefs, bills & statutes, interviews, teaching resources, audio/video, suggested readings, and links.
2. Visit our database of academic literature with citations and annotations of literature related to the issue of Shift Work. You can connect to this database at:
http://library.bc.edu/F?func=find-b-0&local_base=BCL_WF



References

Aguirre, A., & Kerin, A. (2004). *Shiftwork practices 2005*. Burlington, MA: Circadian Technologies, Inc.

“This report relies on data collected by CIRCADIAN from employers in the extended hours workplace. Each year, CIRCADIAN surveys managers and supervisors to solicit data concerning their operation. The survey incorporates questions about shift schedules, employee demographics, payroll, safety, health care benefits, and key performance indicators such as absenteeism, turnover, and productivity.



Managers are asked to fill out the survey at the CIRCADIAN website. Media positioning, as well as promotional mailings via e-mail and ground mail help attract responders, who received an executive summary of the previous year's report for completing the survey. This year's report is based on the responses of 397 facilities in the U.S. and Canada. These facilities employ more than 129,000 full-time shiftworkers.

Manufacturing, utilities, and services represent the highest number of respondents to the survey, as shown in Figure 1. Processing is a subset of manufacturing and represents the continuous process industries, such as oil refineries and chemical plants.

More than 2,300 facilities representing more than 300,000 extended hours employees have been surveyed over the seven-year history of the Shiftwork Practices survey and report. Other sources of data used in this report, and to benchmark facilities, include data collected during our consulting engagements and research studies, as well as in employee surveys collected from 18,500 individual extended hours employees over a six-year time span..." (Aguirre & Kerin, 2004).

"Approximately 400 North American facilities completed this year's survey, representing more than 129,000 full-time and 20,000 part-time shiftworkers" (Aguirre & Kerin, 2004).

Gornick, J. C., Presser, H. B., & Batzdorf, C. (2009, June 9). *The American Prospect*. Retrieved from http://www.prospect.org/cs/articles?article=outside_the_9_to_5

"Janet C. Gornick, Harriet B. Presser, and Caroline Batzdorf write for *The American Prospect* about nonstandard work shifts and those who work them and make suggestions for possible public policies related to nonstandard shifts' working conditions."

Grosswald, B. (2003). Shift work and negative work-to-family spillover. *Journal of Sociology and Social Welfare*, 30, 31-58.

"A representative sample of the U.S. workforce from 1997 National Study of the Changing Workforce data (Families & Work Institute, 1999) was examined to study the relationship between shift work and negative work-to-family spillover...Of the 3,552 sample subjects, 2,877 were wage and salary workers; the others self-employed...Because the goal of the study was to investigate family outcomes, analyses included only workers with families (n = 2,429). Day workers composed 72.4%. Ten percent reported working flexible shifts. Rotating shift workers constituted 5.9%. Evening, night, and split shift workers comprised 4.5%, 4.2%, and 1.2%, respectively. The 1.7% who did not fit any categories listed was classified as 'Other.' A majority (55%) were between ages 33 and 51, 30.4% were younger than 33, and 14.7% were over 52. The gender distribution was close to half women and half men. A large majority (78.7%) were non-Hispanic whites, 12.4% were African-American, and 8.9% 'other.' Household income ranged from 0 to \$1 million with a median of \$45,849, and a mean of \$57,355. Most sample participants (71.7%) were living with a spouse or partner. A small percentage (22.3%) resided with their own children under six years old" (Grosswald, 2003, p. 31, p. 37, p. 38).

Grosswald, B. (2004). The effects of shift work on family satisfaction. *Families in Society: The Journal of Contemporary Social Services*, 85(3), 413-423.

"Data from the FWI National Study of the Changing Workforce (1999) constituted the basis for the study. Between March 14, 1997 and July 27, 1997, Louis Harris and Associates conducted a survey using a questionnaire developed by the FWI. A total of 3,759 households were contacted. Of these, 3,552 were interviewed, resulting in a response rate of 95%. Of the 3,552 sample subjects, 2,877 were wage and salary workers; the others were self-employed...Because the goal of the study was to investigate families, only workers with families were included in the analyses. The distribution by shift of the resulting sample of wage earners with families (n = 2,429) follows. Day workers composed 72.4% of the sample. Ten percent...reported working flexible shifts with no set hours. Rotating shift workers constituted 5.9% of the sample. Evening, night and split shift workers made up 4.5%, 4.2%, and 1.2% respectively. The 1.7% who did not fit into any shift categories listed were classified as 'other.' The demographic characteristics of the sample are as follows: A majority (55%) were between 33 and 51 years of age, 30.4% were younger than 33, and 14.7% were older than 52. The gender distribution was close to half women and half men. A large majority (78.7%) were non-Hispanic Whites, 12.4% were African American, and 8.9% were classified as 'other.' Household income ranged from \$0 to \$1 million, with a median of \$45,849 and a mean of \$57,355. Most sample participants (71.7%) were living with a spouse or partner. Fewer than one quarter (22.3%) resided with their own children under 6 years old" (Grosswald, 2004, p. 415).



Le Bihan, B., & Martin, C. (2004). Atypical working hours: Consequences for childcare arrangements. *Social Policy and Administration*, 38, 565–590.

“The SOCCARE Project, carried out with the support of the European Commission in five countries (Italy, Finland, France, Portugal, United Kingdom) on a series of family types under pressure from the point of view of their care needs, enables us to provide some elements of analysis on the question of reconciliation between care work and professional life with atypical working hours...We will give preference to two types of family situations here: households where both parents work (dual-earner couples) and lone-parent households. We will concentrate on childcare needs in three out of the five countries studied: Portugal, France and Finland...[w]e analyse the situation from a small, consistent sample of cases selected in each country, describing both the types of families' care arrangements, their larger or smaller stability and the consequences of these work situations on daily life and on social and family relationships” (Le Bihan & Martin, 2004, p. 566).

McMenamin, T. (2007). A time to work: recent trends in shift work and flexible schedules. *Monthly Labor Review*, 130(12), 3–15.

“The data presented in this article and other information on work schedules and shifts were obtained from a supplement to the May 2004 Current Population Survey (CPS), a monthly sample survey of about 60,000 households conducted by the U.S. Census Bureau for the Bureau of Labor Statistics (BLS), principally to gather information on employment and unemployment. Respondents to the May 2004 supplement answered questions about work schedules or shifts and whether they did any job-related work at home” (McMenamin, 2007, p. 15).

Presser, H. B. (2003). Race-ethnic and gender differences in nonstandard work shifts. *Work and Occupations*, 30, 412–439.

“This analysis is based on data from the May 1997 Current Population Survey (CPS). The CPS is a nationally representative monthly survey of about 50,000 households conducted by the U.S. Bureau of the Census for the Bureau of Labor Statistics (BLS)...My analysis is limited to civilians aged 18 and older who work for pay, and the work schedule data are specific to those in nonagricultural occupations. Employed persons include both the self-employed and wage and salary workers and the part-time and full-time workers. Unemployed persons seeking work are not included. The total number of civilians aged 18 and older in the CPS that meet the above conditions is 88,040; the total number employed is 57,192. The sample sizes are smaller when allowing for missing data on work schedule behavior and other relevant variables. The percentages and medians reported are weighted for national representativeness. However, the number of cases reported refers to the unweighted sample” (Presser, 2003, pp. 415–416).

Bureau of Labor Statistics. (2005, July 1). *Workers on flexible and shift schedules in May 2004*. Washington, DC: U.S. Department of Labor. Retrieved from <http://www.bls.gov/news.release/flex.toc.htm>

These data and other information on work schedules were obtained from a supplement to the May 2004 Current Population Survey (CPS). The CPS is a monthly sample survey of about 60,000 households conducted by the U.S. Census Bureau for the Bureau of Labor Statistics (BLS), principally to gather information on employment and unemployment for the nation. Respondents to the May 2004 supplement answered questions about flexible and shift schedules, the reasons for working particular shifts, the beginning and ending hours of work, formal flexitime programs, home-based work, and other related topics. The data in this release cover the incidence and nature of flexible and shift schedules and pertain to wage and salary workers who usually worked 35 hours or more per week on their principal job. The data exclude all self-employed persons, regardless of whether or not their businesses were incorporated.

The May 2001 data presented in this release have been revised to reflect the introduction of Census 2000-based population controls and thus may differ from previously published estimates, which were based on population controls derived from the 1990 census. The introduction of the Census 2000-based population controls increased the May 2001 employment levels but had relatively little impact on proportions and percents derived from the employment levels. Sample results from the CPS are weighted up to independent estimates of the population by sex, age, race, and Hispanic or Latino/non-Hispanic ethnicity. The weights, or population controls, are developed using counts of the civilian noninstitutional population derived from the decennial census and are updated using information from administrative records.



Williams, C. (2008, August 5–16). Work–life balance of shift workers. *Perspectives*. Ottawa, Ontario: Statistics Canada. Retrieved from <http://www.statcan.gc.ca/pub/75-001-x/2008108/pdf/10677-eng.pdf>

“Every year since 1985, the General Social Survey (GSS) has interviewed Canadians aged 15 and over in the 10 provinces on a wide range of issues. This paper examines GSS time–use data collected using a 24–hour time diary. In 2005 the sample size was 19,600. The target population of this study was persons aged 19 to 64 at the time of the survey who worked full time (30 hours per week or more). Students were excluded” (Williams, 2008, p. 6).
