

WORK SCHEDULES AND EMPLOYEE TURNOVER

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ABSTRACT

We investigated the effects of working schedules with different times of the day, different days of the week, and part- or full-time status, along with the effects of perceived mobility, on employee turnover. We hypothesized that employees who work day shifts, do not work weekends, are full time, or perceive low levels of mobility, will turnover slower than other employees. We also hypothesized certain interaction effects. Using hierarchical regression analyses, working at night, on weekends, part time, and higher perceived mobility, significantly predicted greater employee turnover as hypothesized. We discuss these findings, as well as their theoretical and practical implications.

Keywords: work schedules; work status; turnover; organizational commitment; job attitudes

Introduction

As more businesses operate around the clock in both North America and Europe, there has been an increase in employees working nonstandard schedules outside the standard daytime (9-5), Monday through Friday, full-time (FT) work week (Barling & Gallagher, 1996; Presser, 2003). About 17% of the FT workforce and 36% of the part-time (PT) workforce in the U.S. work

nonstandard work schedules. Further, Presser's analysis of the May 1997 Current Population Survey data revealed that 40% of Americans work a schedule not in the daytime and/or on weekends. Presser further argued that the evidence indicates that most people working nonstandard schedules would prefer not to be. Therefore, given that turnover is both a likely and a potentially costly consequence of having to work an undesirable schedule, research concerning the effects of work schedule patterns on turnover is of clear practical and theoretical value.

There is evidence that employees on nonstandard schedules have higher turnover than those working standard FT day shift schedules (Jamal, 1981; Martin & Sinclair, in press). However, other studies have found no differences in turnover between shift workers and non-shift workers (Schmieder & Smith, 1996). Working nonstandard schedules is also related to several employee attitudes that lead to turnover, such as lower organizational commitment and/or job satisfaction (Furnham & Hughes, 1999). Given the increased use of nonstandard schedules, it is important to consider how work schedules affect employee attitudes and subsequent turnover behavior. Examining the relationships between different work schedules and employee turnover is important because turnover costs employers millions of dollars each year (Hom & Griffeth, 1995).

Our study advances the literature by examining how three work schedule dimensions relate to actual employee turnover: the time of the hours worked (day or night shifts), the days of the hours worked (weekdays only or weekends), and the number of hours worked (FT or PT status). We will also examine how perceived employment mobility, which affects whether and how employees may think about quitting (Mobley, 1977), relates to turnover. The availability and quality of alternative job opportunities help shape an individual's decision to stay or leave an organization (Mobley, 1977). Quality of alternatives is related to labor-market conditions, which may explain as much as 70 to 80% of voluntary quit-rate variance (Armknrecht & Early, 1972).

Work Schedule Patterns

There has been a substantial amount of recent research on PT employees (e.g., Martin & Sinclair, in press; Thorsteinson, 2003). Research has clearly established that PT employees turnover faster than FT employees (Jackofsky, Salter, & Peters, 1986). Although many studies have investigated shift work, few have examined both shift work and days of the week worked together (Jamal, 2004; Staines & Pleck, 1984). Little research, if any, has examined the joint effects of these two scheduling dimensions on employee turnover. Furthermore, no research to date has examined these two scheduling variables in conjunction with FT or PT work status.

Night shift work has received considerable research attention, and has been linked to job dissatisfaction (Furnham & Hughes, 1999), affective disturbances such as loneliness, poor sleep quality, physical health problems, and social/domestic problems (Presser, 2003). In contrast, weekend work has been less studied. Employees with weekend work have been found to have significantly higher emotional exhaustion, job stress and psychosomatic health problems. The current research may help those employing workers on nonstandard schedules to understand the costs and benefits of different strategies for managing work schedules, such as compensation based strategies or awarding employee schedule preferences. Understanding how work schedules influence turnover can assist organizations in designing schedules and developing policies to increase the retention of valued employees.

Social Exchange Theory (SET) (Blau, 1964) can explain how night and weekend work have the possibility to influence employee attitudes and turnover. SET is based on equity theory (Adams, 1965), which states that people tend to view social interactions similar to economic transactions, as they seek a balance between what is given and what is received. Extensions of SET to organizations have led researchers to characterize employees' relationships to their employers as an exchange relationship (e.g., Rhoades & Eisenberger, 2002). Employees evaluate exchanges with their employers based on perceptions of the inputs they bring to the organization and the outcomes they receive from the organization (e.g., pay, positive work environment). Positive exchange relationships create feelings of obligation, leading employees to reciprocate favorable employer treatment with positive attitudes and with behaviors that will benefit their organization.

From an SET perspective, employees' work schedules represent an important aspect of the quality of their relationship with the organization. Applied to work schedules, SET suggests that the negative aspects of night and/or weekend work may lead employees to view such schedules as less desirable than daytime and weekday schedules, and as a result, feel less attached to their employer. Moreover, in many organizations that operate around the clock, particularly unionized organizations, working on more desirable schedules with more highly valued weekend and night hours off (Demerouti, Geurts, Bakker, and Euwema, 2004) is at least partially determined by one's seniority. In such cases, workers with daytime and/or weekday schedules, not only have more desirable schedules, but because of their higher seniority, they also already have invested more time and effort in their employment relationship than workers on the other schedules. Based on this analysis, we propose the following:

Hypothesis 1a: Shift work relates to employee turnover, such that individuals working the day shift remain with the organization longer than individuals working the night shift.

Hypothesis 1b: Weekend work relates to employee turnover, such that individuals not working weekends remain with the organization longer than individuals working weekends.

Nonstandard PT work schedules that involve fewer than the traditional FT 35 to 40 hour work week are becoming increasingly common (Barling & Gallagher, 1996). Organizations are shifting toward employing more PT workers because of increased schedule demands and reduced costs associated with wages and benefits. Additionally, some employees may prefer different work arrangements, such as PT work, so they can tend to obligations outside of work. For example, PT employees may often work fewer hours than regular FT employees in order to balance the demands of childcare, school, and/or employment at another job.

Partial Inclusion Theory (PIT) (Katz & Kahn, 1978) posits that employees have both work and non-work roles that compete for their time and involvement. This theory suggests that FT employees are more likely to be involved with their employers than PT employees, who may give greater priorities to their family or schooling than to their PT job. Indeed, there is some evidence to suggest that FT employees are more involved in their jobs than PT employees (Thorsteinson, 2003). Further, some PT employees enter into their jobs with short-term goals in mind, and may plan to quit when those goals, such as completing school, are met (Peters, Jackofsky, & Salter, 1981). Drawing from PIT, we propose that FT workers turnover slower than PT workers. This prediction is consonant with the results of several studies.

Hypothesis 2: PT employees turnover faster than FT employees.

The perceptions of both the availability of alternative jobs and the costs of leaving will ultimately influence employees' future employment decisions such that employees who perceive more costs associated with quitting will remain with the organization longer than employees who perceive fewer costs. Many employees may not quit because they perceive that they do not have better options elsewhere. This may be especially salient in unionized settings where tenure influences work schedules and other desirable outcomes such as pay, promotions, and benefit coverage. Individuals with high perceived mobility should feel that they can easily find better employment elsewhere and thus, that they would not lose as much by leaving their current jobs. On the other hand, employees with low perceived mobility may believe that they would suffer negative consequences if they left their jobs. This discussion leads to the third hypothesis.

Hypothesis 3: Perceived employment mobility is positively related to employee turnover, such that employees with higher levels of perceived mobility turnover faster than employees with lower levels of perceived mobility.

Proposed Moderators

Few studies have examined the interactive effects of work schedule variables on turnover. Our study addresses this gap in the literature by examining the relationship between night and weekend schedules, and the moderator of work status with respect to employee turnover. PIT suggests that individuals working PT may be more involved in the non-work aspects of their lives and therefore more likely to leave their jobs. Research has also found that working nonstandard schedules makes it harder to obtain the benefits of working fewer hours (i.e., being more involved with outside non-work aspects of ones' life). Using SET, Hypothesis 1 suggested that employees working night shifts or weekends may be less likely to stay with their organizations as long as employees working the more desirable schedules. In Hypothesis 2, we used PIT to propose that there would be a relationship between work status and employee turnover, such that PT employees will remain with the organization a shorter period of time than FT employees. Given that working a nonstandard schedule makes it more difficult for employees to participate in other (i.e., non-work) roles, we expect that the compounding effects of working PT and working on undesirable schedules will result in faster turnover.

Hypothesis 4a: Work status moderates the relationship between shift work and turnover such that the relationship between night shift work and turnover is stronger for PT employees than for FT employees.

Hypothesis 4b: Work status moderates the relationship between days of the week worked and turnover such that the relationship between weekend work and turnover is stronger for PT employees than for FT employees.

Method

Participants and sample. The participants worked at a large unionized Midwestern retailer of groceries and general merchandise who were surveyed in 1998. Only 2,374 worked entirely on one shift (the same shift for each day worked) and on either the day or night shifts. By eliminating the evening and combined shifts, our study centered on the most clearly defined

shifts and on the two shifts which had the least overlap. Similar to Jamal (2004), we developed our two-fold classification based on respondents' reports of the pattern of shifts they worked, both for Mondays through Fridays and on weekends. The 650 employees who worked a single day or night shift and who left employment by February 2001 were included in this study. Each respondent was described by whether s/he worked the day or night shift and by whether s/he worked weekdays only or also on weekends. Participants were also asked to indicate whether the employer classified them as a FT or PT employee. FT employees constituted 61 percent of the respondents analyzed.

Employment mobility. The perceived employment mobility scale consisted of four items ($\alpha = .77$) adapted from Cammann, Fichman, Jenkins, and Klesh (1983). High scores represented high levels of perceived mobility. We averaged the responses to each item to obtain a scale score.

Employee turnover. We examined the union roster every three months over a period of two and half years, and participants who were no longer on the roster were recorded as having turned over. As the sample differed in their initial tenure, and because turnover is tenure-dependent we based our turnover measure on *total seniority until turnover* for all employees who left between September 1998 and February 2001. This measure consisted of the employee's seniority (in months) at the time of the survey plus the number of months after September 1998 until the employee left the organization. This measure tracks respondents from the date they were hired to the date they left the organization, with analyses only involving those 650 who left the organization during our study. Therefore, this measure controls for prior tenure, with higher scores for those who remained with the organization longer.

Control variables. As the literature suggested that employees on different schedules vary on their organizational commitment and satisfaction, and because these two variables are well-known predictors of turnover (Cooper-Hakim & Viswesvaran, 2005; Peters et al., 1981), we controlled for them in our multivariate analyses, as they represented the most plausible alternate explanation for turnover beyond perceived employment mobility. Organizational commitment was assessed with three items ($\alpha = .88$), which measure employees' emotional attachment to the focal organization adapted from Mowday, Porter, and Steers (1982). Job satisfaction was assessed by a three-item global measure ($\alpha = .86$) developed by Cammann et al. (1983).

Analysis strategy. Since our research is based on the assumption that nonstandard schedules are less desirable than standard work schedules (Presser, 2003), we had to determine that employees in our sample on nonstandard schedules were less satisfied with their work schedules than employees on standard work schedules. Thus, we used a data set matched from 1995 to 1998 which had scheduling satisfaction scales and determined that the day and weekday schedules were more desirable than night and weekend schedules for our sample. Then we performed hierarchical regression analyses. The two control variables of job satisfaction and organizational commitment were entered first. In the second step, shift (day vs. night) was entered. In the third step, weekend or no weekend schedule, was entered. In the fourth step, work status and perceived mobility were entered. In the fifth step we entered the relevant interaction variables. To determine the support for the hypotheses, at each step we evaluated the statistical significance of the change in R^2 .

Table 1: Regression Results

Step and variables	Adj. R ²	ΔR ²	Beta
Step 1	.03	.03**	
Job Satisfaction			.05
Organizational Commitment			-.20**
Step 2	.09	.07**	
Job Satisfaction			.05
Organizational Commitment			-.19**
Day or Night Shift (1= day, 2 = night)			-.27**
Step 3	.14	.05**	
Job Satisfaction			.06
Organizational Commitment			-.20**
Day or Night Shift (1= day, 2 = night)			-.20**
Weekday or Weekend Shift (1 = Weekday, 2 = Weekend)			-.23**
Step 4	.20	.06**	
Job Satisfaction			.05
Organizational Commitment			-.24**
Day or Night Shift (1= day, 2 = night)			-.20**
Weekday or Weekend Shift (1= Weekday, 2 = Weekend)			-.21**
Part- or Full-Time Status (1 = part, 2 = full)			.15**
Perceived Mobility (R)			-.17**
Step 5	.22	.02**	
Job Satisfaction			.06
Organizational Commitment			-.23**
Day or Night Shift (1= day, 2 = night)			-.20**
Weekday or Weekend Shift (1= Weekday, 2 = Weekend)			-.19**
Part- or Full-Time Status (1=part, 2=full)			.17**
Perceived Mobility (R)			-.16**
Day or Night Shift x Part- or Full-time Status Interaction			.07
Weekday or Weekend Shift x Part- or Full-time Status			-.15**

Note. *p < .05, ** p < .01.

Results

The regression results can be found in Table 1. Hypotheses 1-3 concerned the direct effects of the work schedule dimensions (shift, weekend work, and work status), and perceived mobility on employee turnover. The night shift variable was added to the regression analyses in the second step, after the two controls, and resulted in a significant increase in the variance explained of months employed until turnover. The addition of the weekend work predictor in Step 3 of the regression analyses resulted in a significant increase in the variance explained. Hypothesis 1a stated that employees working the day shift would remain with the organization longer than employees working the night shift, and was supported, with day shift employees staying an average of 53 months longer than night shift employees. Hypothesis 1b stated that employees working only weekday schedules would remain with the organization longer than employees working weekend schedules. Hypothesis 1b was supported, with employees not working on the weekend staying an average of 60 months longer than employees working weekend schedules. The addition of work status and perceived employment mobility as predictors in Step 4 of the

regression analysis resulted in a significant increase in the variance explained. Hypothesis 2 stated that PT employees would turnover faster than FT employees. Hypothesis 2 was supported as FT employees remained with the organization an average of 43 months longer than PT employees. Hypothesis 3 stated that there would be a positive relationship between perceived employment mobility and employee turnover, and was also supported.

Hypothesis 4 concerned the interaction effects of work schedule and work status. The work status by work schedule interaction terms explained a significant increase in variance above and beyond the main effects and control variables. Examination of the regression coefficients showed that only the interaction of work status and working weekday versus weekend schedules was a significant predictor of turnover. Thus, Hypothesis 4a was not supported. While we did find a significant interaction effect in relation to Hypothesis 4b, it did not support the hypothesis. The total seniority until turnover for PT respondents did not differ significantly regardless of whether they worked on the weekends or not, with an average of 74 months for weekday workers and 75 months for weekend workers. Since the two PT group means were essentially the same, the hypothesis was not supported. For the FT group, weekday workers stayed an average of 61 months longer ($p < .001$) than weekend workers, with means of 158 and 97 months respectively.

Discussion

Overall, results of this study show the need for increased research on outcomes associated with nonstandard work schedules. As predicted, employees left faster when they worked at night, on weekends, or on PT schedules. In addition, perceived mobility was related to turnover, as employees with greater perceived mobility left the organization faster. Finally, while work status moderated the relationship between days of the week worked and turnover, the results did not support the hypothesis. PT employees turned over the same irrespective of the days of the week they worked. In contrast, FT workers on the weekday schedules remained employed much longer than any of the other three work status by weekend-weekday schedule combinations.

These results show how hard it is to keep employees who work fixed nonstandard work schedules from leaving their jobs, be it working less than the number of hours considered to be FT, at night, or on the weekends. We found that where such schedules exist, employees turnover faster. In all industrialized societies, workers are increasingly likely to work on nonstandard schedules (Fenwick & Tausig, 2001; Presser, 2003). Therefore, organizations have a need to explore ways to manage nonstandard schedules to lessen some of the negative reactions employees may have, including higher turnover.

We used SET to propose that participants who work on night or weekend schedules would be more likely to turnover than daytime or weekday workers. Presser (2003) found that working weekends relates to higher work-family conflict. Jamal (2004) found that employees working weekends reported significantly higher emotional exhaustion, job stress and psychosomatic health problems. If organizations could find a fair way to allocate such schedules, it could have an influence on the social exchange relationship between the employee and the organization.

Our results add to previous research by finding that employees working either the night or the weekend schedules turnover faster than employees working only in the daytime or on weekdays. Our hypothesis that PT employees would turnover faster than FT employees was also supported. One potential explanation for this finding is that FT employees received better benefits packages

than employees classified as PT. This finding lends further support of PIT theory, as it suggests that PT employees may be more inclined to leave the organization than FT employees. Perhaps PT employees have other salient non-work roles and may leave when work interferes with carrying out these roles. We also found that perceived mobility was related to turnover. This suggests that when employees perceive high costs associated with leaving, they will remain longer with the organization, even if they are working undesirable schedules and might leave if their mobility perceptions were different. March and Simon (1958) suggested that the equilibrium between employee contributions and organizational inducements determines an individual's likelihood to quit through two mechanisms. The first is based on an individual's job satisfaction, which depends on the conformity of job characteristics to one's self-image, the predictability of job relationships, and the compatibility of the job with other roles, and relates to the perceived desirability of movement. The second is the availability of promotion opportunities within an organization, which also influences the perceived desirability of turnover. March and Simon also proposed that the perceived ease of movement influences employee turnover.

Practical Implications

Some studies suggest minimizing exposure to nonstandard schedules to eliminate negative employee reactions (e.g., Demerouti et al., 2004). However, since retail, health care, public safety, and other industries require such schedules, the key is not the work schedule itself, but how they are managed. Our results suggest that better management of employee work schedules may be one method of reducing turnover, as we found that employees working the night and weekend schedules stay with their organizations a shorter period of time. Based on these results, there are several actions organizations might take to improve employee retention. Although not directly measured in this study, some research suggests that the negative effects of night and weekend schedules may be minimized when employees choose to work them (Fenwick & Tausig, 2001; Jamal, 2004). In the present study, these decisions are at least partially based on tenure. Employers can explore merit-based work schedule assignments in which high performing workers have their choice of schedules. Either tenure-based or merit-based schedule assignment systems may create a situation where most high performers tend to work standard schedules. In some service-oriented positions where most customers come during the day, this might be an advantageous strategy. However, in situations where work is distributed fairly equally across the week, this strategy might undermine productivity on evening, night, or weekend schedules. Finally, another commonly used method is to provide financial incentives (bonuses or premiums) for employees working nonstandard schedules. Given these issues, the costs and benefits of different methods for managing work schedule assignments, such as compensation based strategies or awarding employee preferences for schedules clearly needs further research.

The finding that PT work is related to increased employee turnover suggests that organizations should seriously consider how they utilize PT workers. While many organizations use PT employees as a method to cut costs, it may be that the high expense of turnover outweighs the savings of employing PT workers. Organizational leaders should consider the potential costs of increased turnover of PT workers when determining their desired mix of FT and PT positions. Finally, our current findings also may help organizations with strategic planning related to their turnover forecasts. Organizations can plan for individuals working night, weekend, and PT schedules to remain for a shorter period of time. In addition, understanding local labor markets may help predict both the rate of turnover and the availability of future applicants.

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