

Compressed Lives: How “Flexible” are Employer-Imposed Compressed Work Schedules?

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Abstract

Purpose: The following study examines employee satisfaction with an employer-imposed compressed workweek (“CWW”) schedule within a U.S. municipality (“City”).

Design/methodology/approach: The study utilized an employee survey ($N = 779$) to test factors related to employee satisfaction with the CWW, a four-day, 10-hours/day workweek (“4/10 schedule”).

Findings: Employee satisfaction with the schedule is influenced by previous 4/10 pilot experience, work schedule preference, and happiness with the 4/10 schedule’s implementation. Additionally, sick leave figures and survey results regarding informal substitute work schedules suggest worker fatigue may limit the overall organizational value of the 4/10 schedule.

Research limitations/implications: The study was opportunistic in nature and therefore constrained by the City’s HR Department concerns for survey length and respondent anonymity. This meant an inability to collect demographic data or to utilize validated scales.

Practical implications: Analysis suggests that the potential work-life benefits of flexible work schedules may not apply equally to *employer-imposed* vs. *employee-chosen* compressed work schedules. Further, CWWs engender greater fatigue despite employee satisfaction, an issue managers should consider when weighing schedule costs and benefits.

Originality/value: The study highlights the importance of employee choice in conceptualizing flexibility and for capturing CWW benefits; namely an initiative’s voluntary or involuntary nature should be considered when determining whether it is likely to be beneficial for employees.

Keywords:

Alternative Work Schedules (AWS), Compressed Work Schedules (CWS), Work Schedule Satisfaction, Fatigue, Work-Life Balance (WLB), Family Friendly Policies, 4/10 Schedules

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Introduction

A growing interest in workplace flexibility has been prompted by business trends including technological advancements and the 24-7 society (Deery *et al.*, 2016), as well as demographic trends including higher female workforce participation, increased caregiver responsibilities, and growth in single-parent and two-income households (BLS, 2015). The shift away from a fixed eight-hours per day, five-days a week schedule also reflects an increased desire for autonomy and job control by younger workers, who often value work-life balance as a goal in itself (Kuron *et al.*, 2015). Workplace flexibility refers to workplace measures that allow greater employee choice in the timing, location, continuity, and/or amount of work to be performed (Kossek and Michel, 2011; Kossek and Thompson, 2016). Flexible work schedules have increasingly been adopted in private and public workplaces as a means of achieving business goals and enabling employees to manage competing pressures from work, family, and other non-work realms (Matos and Galinsky, 2014).

One common form of flexible scheduling is the compressed workweek (CWW), where a full-time schedule is condensed into fewer working days with longer working hours each day; for example, a four-day, 10-hour workweek (Arbon *et al.*, 2012; Baltes *et al.*, 1999). Although CWWs were first promulgated in the private sector, they are particularly common in the public sector (Wheatley, 2012), and often cast as a family-friendly policy (Durst, 1999). A 2010 study by the Texas Comptroller of Public Accounts showed one in six U.S. municipal governments had full-time staff on a 4/10 schedule (Combs, 2010), while a recent survey of state and local governments found 59% of surveyed organizations offered some form of alternative work scheduling (SLGE, 2016). Although it is generally acknowledged that CWWs offer little control over the timing of work or non-work tasks (Golden, 2012), existing research tends to assume CWWs nonetheless satisfy employee needs

and allow them the flexibility to better handle family and life demands (Deery *et al.*, 2016; Kelly *et al.*, 2008).

Despite generally positive perception of CWWs and widespread adoption (Baltes *et al.*, 1999; Julien *et al.*, 2011), research on public sector CWWs shows mixed effects. Facer and Wadsworth (2008) found employees working a 4/10 schedule were relatively more productive, but lacked greater job satisfaction. A later study found sustained productivity gains, while employers reaped other savings such as lower energy costs (Facer and Wadsworth, 2010). A 4/10 schedule was found to improve the amount of sleep and quality of life for police officers, although benefits did not extend to 12-hour shifts (Amendola *et al.*, 2011). Wadsworth *et al.* (2010) found improvements in work-life balance and employee morale, along with tradeoffs including scheduling difficulty, decreased productivity, and employee dissatisfaction with longer workdays. Compressed schedules were found to have no effect on job satisfaction for groups using them most (men/women in dual-income households with no children present) *and* least (older workers); the same schedules registered negative effects on job satisfaction for single, young men and men in traditional (unemployed spouse and children in the home) households (Saltzstein *et al.*, 2001).

The presence or absence of employee choice may explain the puzzle of why CWWs have not consistently shown positive benefits. Employee choice is an important precondition for workplace flexibility practices to realize gains in work satisfaction, productivity, and work-life balance (Kossek and Thompson, 2016). Based on control theory (Gajendran and Harrison, 2007; Kelly and Moen, 2007; Kossek *et al.*, 2006; Kossek and Thompson, 2016; Thompson and Prottas, 2006) stemming from Karasek’s (1979) job demands-job control model, the positive benefits of flexibility are more likely to manifest if employees can exercise scheduling choices. For example, research on another flexible workplace initiative, telecommuting, shows perceived autonomy as a psychological mediator for positive effects

on job satisfaction, performance, turnover intent, and role stress (Gajendran and Harrison, 2007). Other research demonstrates the usefulness of considering the individual psychological experiences of flexibility rather than focusing solely on more formal measures like usage and amount (Kossek *et al.*, 2006). In this literature stream, flexibility often equates to control (Gajendran and Harrison, 2007), and employee perceptions of control seem critical for realizing benefits. This has direct implications for other forms of flexible scheduling, including CWWs.

This study investigates whether the expected benefits of greater employee schedule satisfaction occur with an *employer-mandated* CWW as opposed to an *employee-chosen* CWW. With data from a U.S. municipality that implemented an employer-mandated CWW, our study uses this opportunistic setting to examine employee perceptions of a “flexible” schedule that in fact resembles an alternative fixed schedule, devoid of employee choice. Based on control theory (Karasek, 1979), we examined whether an imposed CWW will result in lower work schedule satisfaction, especially among employees previously working traditional schedules as compared to those who were previously on a CWW by choice. We also considered variables related to control, including approval of CWW implementation, whether the CWW differs from an employee’s preferred schedule, and whether an employee has worked out an informal substitute schedule with a supervisor. Finally, because employee fatigue is often associated with longer CWW hours (Deery *et al.*, 2016; Golden, 2012), employee-reported energy levels and sick leave taken records were also investigated. The findings use control theory to challenge whether an *employer-imposed* flexible work schedule implemented without employee choice is a true form of workplace flexibility, instead suggesting it represents a lack of “real choices” for employees (Lewis and Humbert, 2010), closer to what Kossek and Thompson (2016) might call bad flexibility.

Theory and Hypotheses

Several theories have been used to understand how the relationship between work environment and other domains of life can predict various individual and organizational outcomes (Kossek and Thompson, 2016; Ronen and Primps, 1981). Given that employer-imposed and employee-chosen workplace programs differ on the element of choice, we use control theory derived from Karasek’s (1979) job demands-job control model. One commonality between this theory and others is the acknowledgement that not only do individuals vary in their needs and preferences, but they also differ in their ability to perceive and navigate the boundaries between important life domains (Ashforth *et al.*, 2000). Workplace initiatives that promote flexibility in time (e.g. flextime, CWWs), location (e.g. telecommuting), and amount of work (e.g. job-sharing) are meant to produce beneficial outcomes for both employees and employers by empowering employees to control important aspects of their job (Kossek and Michel, 2011).

When it comes to the hypothesized benefits of flexibility for employees, it is therefore important to consider control over work time (Kelly and Moen, 2007), as a perceived lack of control in the workplace can harm work-life balance (Golden *et al.*, 2011; Sparks *et al.*, 2001). Perceived control (over both work time and family responsibilities) has been shown to mediate the relationship between family-friendly work practices and outcomes including work-family conflict (Thomas and Ganster, 1995) and employee health and well-being (Thompson and Prottas, 2006). The perception of flexibility appears to make a real difference (Eaton, 2003), and benefits produced by alternative work schedules likely depend on the level of flexibility (Pierce and Newstrom, 1983).

Job control is especially relevant when examining *employer-imposed* compressed work schedules, a specific circumstance where it is less likely that employees can design the work schedule by choosing the work days and times. Moreover, although a CWW may be

cast as a flexible schedule that is an alternative to a traditional five-day, eight-hours/day workweek, this characterization assumes that employees are able to choose the CWW in the first place. Truly flexible work schedules allow employees control to determine their work time, albeit often within certain limits such as designated core business hours. Without an element of choice, a CWW can still be considered an alternative schedule, but not a flexible one (Kossek and Ozeki, 1999; Ronen and Primps, 1981). Since the employer is still exercising exclusive control over work time, this should by extension limit the expected benefits of increased employee autonomy associated with flexible schedules (Pacheco and Webber, 2016).

Compressed schedules can also have costs in terms of employee fatigue and negative employee reactions (Wright *et al.*, 2013). Research finds consistent links between longer working hours and detrimental effects including fatigue (Caruso *et al.*, 2004), emotional exhaustion (Deery *et al.*, 2016), work stress (Golden *et al.*, 2011), and progressively declining productivity rates (Cette *et al.*, 2011; Golden, 2012). With more extreme CWWs (e.g. 12-hour nursing shifts), fatigue is highlighted as a persistent concern (Golden, 2012). In addition to longer hours increasing tiredness and reducing productivity, employees might develop work-arounds like longer work breaks to ameliorate fatigue. Some have proposed that various behaviors of employees not operating at peak levels might be explained by their need to balance work and private life (D'Abate, 2005). Productivity loss from either fatigue or negative employee behavior would likely limit the value of a CWW for both individuals and organizations. Overall, this suggests that research on compressed schedules should carefully consider employee control of work time and therefore distinguish between employee-chosen and employer-imposed CWWs, as we do in the following hypotheses.

CWW Satisfaction

Given the generally positive schedule satisfaction reported in existing research on public sector CWWs (Facer and Wadsworth, 2010; Wadsworth *et al.*, 2010), likely stemming from a better ability to balance work and life, we hypothesize a similar finding among this study’s participants.

Hypothesis 1a: Employees who are assigned to a CWW will be more likely to approve of the arrangement than they are to disapprove of it.

Hypothesis 1b: CWW satisfaction will be positively related to perceived work-life balance.

Predictors of Positive Experience

CWW satisfaction is likely to be significantly associated with several factors. Differences in employee perceptions of CWWs might be influenced by whether the person had worked a longer shift schedule in previous employment (Breugh, 1983). Previous experience with a schedule, especially one chosen by the employee, would likely indicate the schedule satisfies his/her work and non-work needs (Cunningham, 1982). Employees previously working a CWW should thus display higher levels of satisfaction with a now-mandatory schedule since it reflects their initial choice.

Hypothesis 2a: Employees with previous experience of being on a CWW by choice are more likely to report satisfaction with their work schedule after being placed on a mandatory CWW than employees without prior voluntary CWW experience.

Second, existing research resoundingly indicates that reactions to change are more favorable when the change is perceived as having been fairly implemented (Brockner, 2002; Caldwell *et al.*, 2004; Wright *et al.*, 2013).

Hypothesis 2b: Approval of the CWW implementation process is related to a greater likelihood of satisfaction with the mandatory CWW program.

Jobs that satisfy an employee’s desired schedule can produce well-being (Barnett *et al.*, 1999), whereas mismatch between preferred and actual schedules increases job dissatisfaction (Wooden *et al.*, 2009). We thus assume that employees would be relatively unhappy with an imposed schedule that is structured differently than a preferred schedule.

Hypothesis 2c: A preference for a five-day, eight-hours-a-day or other alternative schedule is more likely to be associated with lower CWW satisfaction.

These hypotheses are combined in Figure 1:

Figure 1 here

Energy Levels and Work-Arounds

An employer-imposed CWW may also produce negative outcomes in the form of employee fatigue and work-arounds among staff lacking formal control over their work schedules. Moreover, a mandatory CWW is more likely to be associated with adverse effects on worker well-being and energy levels (Sparks *et al.*, 2001). Likely strategies used by employees to manage fatigue from longer working hours might include using sick leave or informally arranging with a sympathetic supervisor a substitute schedule that deviates from the CWW.

Hypothesis 3a: Lower levels of energy are likely to be positively correlated with lower CWW satisfaction.

Hypothesis 3b: Higher levels of sick leave taken will exist among employees subject to an imposed CWW as compared to staff remaining on a traditional schedule.

Hypothesis 3c: Employees reporting that they have established informal, substitute schedules that differ from the CWW are more likely to report dissatisfaction with a mandatory CWW than employees who have not changed their schedules.

Method

Research Site

Data were collected from a municipal government with approximately 6,000 full-time employees located in the southwestern United States. A pilot CWW in the form of a 4/10 workweek was initially proposed by the Chief Financial Officer and approved by City Council in early 2009. The stated aims were to save energy costs, reduce environmental emissions, provide extended services hours to the public, and improve quality of life for affected City employees. The schedule became mandatory for approximately one-third of the employees across various locations during the summer months of 2009 (June-August). Operating hours for those locations became 07:00-19:00, Monday through Thursday, with offices closed on Fridays. This required participating departments to stagger employees' ten hours of daily work to cover all hours of operation. Although various alternative work schedules had been utilized by some employees prior to the mandatory pilot program, no official deviations from the 4/10 schedule were allowed during the pilot time period. Locations serving mostly administrative functions (e.g. City Hall) participated heavily, whereas critical safety services (e.g. Fire, Police) were largely unaffected. A few work sites containing both administrative and social service staff (e.g. Women, Infants, and Children sites) saw only the former transition to 4/10 schedules, while the latter retained traditional service hours. The pool of affected employees included both classified (unionized) and unclassified staff. At the conclusion of the pilot, all staff returned to the work schedule they

had been working prior to the pilot, and a cost savings analysis and single question employee survey were completed by management.

Based on the pilot program’s officially reported operational savings and a 73% employee approval rating, a similar compressed schedule was again made mandatory for most of the same staff during the following year’s daylight savings time period (May-September, 2010). Before this second iteration came to its scheduled end, City Council voted to make the CWW permanent year-round as part of the annual budget process, and the schedule has continued to-date (see Figure 2 for a more detailed timeline). It was at this point that the first author approached the City with a request to conduct a more detailed survey of employee satisfaction with the 4/10 schedule.

Figure 2 here

Procedure

A survey was developed in conjunction with the City Department of Human Resources (“HR department”) and disseminated to CWW employees in early November 2010. An initial broadcast email and two subsequent reminder emails, each containing a link to the web-based survey, were sent over a three week period. Paper surveys were provided to individuals without work computers. The survey was distributed by the HR department and identified as a graduate research study. The HR department felt that guaranteeing strict anonymity of individual responses was necessary to encourage participation; hence, demographic information was not captured. The survey generated 695 online responses and 130 paper responses, for a total of 825 responses. Fifteen initial responses were removed because respondents were not subject to the 4/10 schedule; 31 more responses were removed after identification as duplicates based on identical IP addresses and matching answers (with

the most recent response retained). This resulted in a final sample of N=779 (35% response rate).

Measures

Survey questions sought to capture various broad dimensions of work life, personal life and other key variables of interest (Appendix 1); all items were developed by the researchers. Although questions were informed by prior research, the study did not use previously validated scales due to HR department-imposed limits on the survey length. The survey employed Likert-scale statements, several categorical questions, and a single open-ended question. The survey design included several techniques to minimize the potential impact of common method bias, including using clear and unambiguous language, avoiding double-barrel questions, presenting simple and highly specific questions/answers, using several reverse-worded items, and employing a variety of question formats (Podsakoff *et al.*, 2012). Additionally, ensuring anonymity and confidentiality of the responses likely reduced the possibility of any bias stemming from participant evaluation apprehension or social desirability (Podsakoff *et al.*, 2003). In addition to the survey, official employee leave figures were obtained for the pilot time period and the previous summer.

4/10 schedule satisfaction. This was measured through two items using categorical (Yes/No) responses. Both items utilized a single prompt, “All thing considered about the 4/10 work schedule...”, and included: “my experience has been positive”, and “the benefits outweigh the negatives”. These two statements were combined into a dichotomous variable, split between respondents who answered “Yes” to both questions and those who did not (Cronbach’s $\alpha = .86$).

Work-life balance. This was measured using eleven five-point Likert-scale statements, with anchors ranging from one (*strongly disagree*) to five (*strongly agree*), and a common prompt: “As a result of the 4/10 work schedule...”. Although these statements were

originally designed to capture three distinct factors: personal life, work life, and work-life balance, exploratory factor analysis with principal axis factoring and orthogonal rotation (varimax) revealed that only one factor was extracted based on Kaiser’s criterion (Eigenvalue > 1). The initial Eigenvalue of the single factor was 8, with this factor explaining 72.68% of the variance. Hence, the eleven statements were considered items of a single work-life balance scale and used as such for subsequent analyses (Cronbach’s $\alpha = .96$).

Independent variables. These were measured using categorical questions (Yes/No) that addressed whether an employee was previously on a 4/10 schedule by choice before it was made mandatory, if an employee was happy with the way the CWW was implemented, and if an employee had worked out an informal schedule variation with a supervisor. Respondents were also asked for their preferred work schedule: “If you have a choice, the work schedule you prefer is...”.

Results

Summary statistics, including means, reliabilities, and correlations among the work-life variables are reported in Table 1.

Table 1 here

Overall Levels of Satisfaction

Hypothesis 1a examined overall approval with the 4/10 schedule, and was supported. A majority of the respondents ($n = 507/779$, 65.1%) felt the experience was a positive one; similarly, most respondents ($n = 495/779$, 63.5%) felt the benefits outweighed the negatives. The association between overall schedule satisfaction and work-life balance (Hypothesis 1b) was also supported. Respondents who reported “Yes/Yes” on the 4/10 schedule satisfaction measure ($M = 4.08$, $SD = .69$) were more likely than other respondents ($M = 2.19$, $SD = .84$) to report higher levels of work-life balance: $t_{591} = 33.16$, $p < .001$, $d = -2.51$.

Predictors of Positive Experience

Hypotheses regarding the main effects of previous voluntary 4/10 schedule experience (H2a), approval of the implementation process (H2b), and work schedule preference (H2c) on 4/10 schedule satisfaction were supported. A logistic regression model showed that, after accounting for the effects of implementation approval, the odds of expressing 4/10 schedule satisfaction were 1.78 times higher for an employee who had previously been on a 4/10 schedule by choice (95% CI: 1.11, 2.86, $p = .018$). Similarly, after accounting for the effects of previous voluntary participation, the odds of expressing 4/10 schedule satisfaction were 43.3 times higher for an employee who approved of the implementation process (95% CI: 17.87, 104.92, $p < .001$). Finally, there was a significant association between whether an employee preferred a 4/10 schedule and expressed 4/10 schedule satisfaction: $X^2_1 = 489.24$, $p < .001$. This association was further supported by both Phi ($\Phi = .80$, $p < .001$) and Cramer's V ($\varphi_c = .80$, $p < .001$).

Energy Levels and Work-Arounds

In support of Hypothesis 3a, there was a significant association between an employee reporting negative energy levels and lower 4/10 schedule satisfaction: $X^2_1 = 314.59$, $p < .001$. This association was further supported by both Phi ($\Phi = .73$, $p < .001$) and Cramer's V ($\varphi_c = .73$, $p < .001$). Additionally, a closer look at the survey statement “As a result of the 4/10 work schedule I have more energy at work” indicates that fatigue may be a problematic result of the 4/10 schedule. The energy statement was the only one registering greater disagreement than agreement among the entire sample, including those who had previously been on a 4/10 schedule by choice: 53% (Strongly Disagree/Disagree) versus 47% (Strongly Agree/Agree). It was also the only statement generating more extreme disagreement (Strongly Disagree: 160) than extreme agreement (Strongly Agree: 131). Thus, not only were a greater number of

employees negatively impacted, but those who were negatively impacted felt those effects more severely.

Although individual-level data on employee sick leave were unavailable, the aggregate amount of sick leave taken by the 4/10 schedule employees compared to traditional-schedule colleagues reveals tentative support for Hypothesis 3b. Table 2 compares the amount of sick leave taken by all City employees and by the 4/10 schedule employees for the summer months of 2008 (when all employees were formally on a traditional schedule) and 2009 (when 1/3 of the employees were transitioned to the 4/10 schedule pilot). There was an overall decrease in sick leave taken by the entire employee population (almost 3,142 hours), but the decrease among 4/10 schedule employees was less than their proportionate representativeness of the workforce. The 4/10 schedule employees represented 34% of the workforce, yet their proportion of the reduction in sick leave taken (nearly 436 hours) was approximately 14%. Thus, a tentative conclusion with these limited data is that the 4/10 schedule did not have a distinctly positive impact on employee sick leave taken.

Table 2 here

Finally, Hypothesis 3c regarding the possible existence of informal substitute schedules was supported. There was a significant association between 4/10 schedule satisfaction and whether an employee had developed a substitute schedule informally with his/her supervisor: $\chi^2_1 = 7.43, p = .006$. This association was further supported by both Phi ($\Phi = -.1, p < .001$) and Cramer's V ($\varphi_c = .1, p < .001$).

Discussion

Although limited in design, the study results offer an opportunistic glimpse at the potential limits of a “flexible” work schedule that is in fact imposed by the employer. The findings are particularly interesting given that this was a natural experiment context where

employees were required to work a CWW rather than being allowed to choose it as a flexible option for themselves. The study relied on control theory (Karasek, 1979) to frame implications for work schedule satisfaction.

The findings strongly suggest that a compressed work schedule implemented as an employer-imposed, one-size-fits-all solution fails to deliver the same benefits as truly flexible forms of alternative work scheduling. While the CWW was generally satisfying for the majority of staff (~65%), this was shaped by factors such as previous experience on a similar schedule, approval of the implementation process, and preference for the CWW format. These findings correspond with research showing that individual preferences for a CWW predict stronger benefits; for example, absenteeism decreases with higher CWW satisfaction (Deery *et al.*, 2016). These findings also support the importance of employee control for flexibility, in line with other research highlighting that an employee’s sense of control may be needed for a formal policy to show full positive outcomes (Thompson and Prottas, 2006). By explicitly examining the case of an employer-imposed mandatory CWW, we contribute to research on flexible programs that nonetheless do not represent a source of ‘good’ flexibility for employees (Kossek and Thompson, 2016).

Lower schedule satisfaction was associated with lower levels of energy, which was strongly felt even by some of the employees who approved of the 4/10 schedule. This corresponds to prior findings about the associations of decreased physical health and exhaustion with longer working hours (Golden, 2012). Informal substitute schedules, presumably owing their existence to the inability of the CWW to satisfy certain employees’ needs, were another potentially negative outcome associated with lower schedule satisfaction, as employees on informal schedule variations can diminish energy savings if they continue to utilize buildings that should ostensibly be closed. Fatigue and related loss of productivity can also erode the organizational benefits of a CWW. The overall business case for programs like

CWWs should consider other benefits, such as attracting better applicants and cost savings (Kossek and Michel, 2011). However, if the productivity of employees is overly hampered due to fatigue or other non-productive behavior resulting from an unsatisfied need to balance work and private life (D'Abate, 2005), then the overall organizational benefit of the schedule becomes more doubtful. Of course the possibility remains that although participants expressed higher levels of fatigue, their actual productivity may not have been diminished, as has been the case in some previous research (Amendola *et al.*, 2011).

This study highlights a gap in research and practice whereby compressed work schedules are typically assumed to promote flexibility in the workplace, despite some CWWs being employer-imposed rather than employee-chosen. Many of the purported benefits associated with flexible work schedules are used as rationale for implementing compressed work schedules in the public sector. But the findings suggest that imposed work schedules will likely be bereft of the autonomy and needs satisfaction benefits of flexibility, thereby eroding personal and organizational benefits. This contributes to workplace flexibility research by offering a possible explanation for the mixed results in past research on the effectiveness of CWWs for promoting a range of workplace benefits (Saltzstein *et al.*, 2001). This study also complements other literature that has highlighted a gap between the formal availability and actual use of flexible work practices (Lewis and Humbert, 2010; McDonald *et al.*, 2007; Pasamar, 2015), because it likewise shows how employee control is apt to be a necessary condition for successful workplace flexibility initiatives, and that flexibility without choice is not truly flexible (Kossek and Thompson, 2016).

Conclusion

Alternative work schedules like CWWs are usually viewed as a flexible means of achieving positive outcomes for both employers and employees (Kossek and Michel, 2011). Most frequently couched in terms of flexibility, and often cast as a family-friendly policy

(Durst, 1999), these programs are meant to foster effective work-life balance and reduce work-life conflict which, in turn, has been shown to produce personal and organizational benefits, notably job satisfaction (Matos and Galinsky, 2014). Truly flexible schedules enable employee benefits derived from the perceived control of working time and design of the job (Karasek, 1979). In theory, alternative scheduling offers the possibility of restructuring a person’s work life to meet needs holistically, whether it means being able to make the children’s school pickup (Wheatley, 2012) or avoiding long rush hour traffic by leaving work 30 minutes earlier. However, as proposed and supported by this study, a mandatory AWS is a “flexible” work schedule in form, but not spirit, because it is missing the element of employee choice. If an AWS is a work requirement that represents an exchange of one fixed schedule for another with no element of employee choice involved (Ronen and Primps, 1981), then placing workers on a fixed alternative schedule should not be construed as the equivalent of a truly flexible work arrangement (Kossek and Ozeki, 1999).

In terms of future research, this study looked at employee perceptions in one workplace after a large proportion of the staff had transitioned to a CWW. A natural extension would be to explicitly compare mandatory versus voluntary schedules across multiple workplaces in order to better isolate the effects of a mandatory CWW on employees. The current study was also unable to collect demographic information, an important limitation given the role that gender plays in schedule adoption (Lewis and Humbert, 2010) and the differing effects of CWWs on employees according to age and family responsibilities (as noted in Deery *et al.*, 2016). In addition to demographics, research on flexible work schedules should probably take into account differences in job structure, which this study was also unable to do. For example, future studies might want to control for the greater general workplace autonomy enjoyed by unclassified staff as compared to classified staff subject to timecard requirements.

The focus of this study was on employee work schedule satisfaction as it relates to flexibility in scheduling and factors involving employee control of time. However, there are several other forms of workplace flexibility that involve attributes of the work environment other than time, including choice in location (e.g. telecommuting) and amount of work, as seen with job sharing (Kossek and Thompson, 2016). This study’s findings are likely to be relevant for these other types of workplace flexibility initiatives so long as the employer retains exclusive control over how the work condition is carried out. Therefore, future research in these other areas of workplace flexibility may also want to take into account the amount of employee control involved in those initiatives.

The study also has implications for practitioners. First, work fatigue is clearly an issue managers should be prepared to deal with during CWW implementation and beyond. Managers would be advised to systematically assess the needs of their employees, select programs that are more likely to produce desired benefits, and then evaluate the results for evidence of the hoped-for benefits (Arbon *et al.*, 2012; Fernandez and Rainey, 2006). Second, it would be advisable for industry surveys to distinguish between voluntary and involuntary alternative work schedules, as this is currently lacking. For example, in the annual Federal Employee Viewpoint Survey, a single question is asked of respondents: “How satisfied are you with the following Work/Life program in your agency: Alternative Work Schedules (AWS)?”.^[1] This is also reflected in a recent survey of state and local governments, whereby one of the questions, “What flexible work practices does your organization offer?”, explicitly included 4/10 schedules in the category of flexible scheduling (SLGE, 2016). Finally, a recent Society for Human Resource Management (2016) survey utilized similar language in noting compressed workweeks as a “common flexible work arrangement *offered* by employers” (emphasis added), implying it is employee chosen. We hope this study leads to a

greater awareness of the importance of employee control for the successful implementation and measurement of workplace flexibility initiatives.

Notes

1. The lack of flexibility in a compressed schedule is tacitly acknowledged in the federal legislation authorizing alternative work schedules. Although government agencies may require non-unionized employees to participate in flexible work schedules, this assumes employees can select a traditional schedule as the chosen “flexible” work arrangement. In contrast, as referenced in the Office of Personnel Management’s Handbook on Alternative Work Schedules (2016), an agency cannot require employees to participate in a compressed work schedule “unless a majority of the employees in the relevant work unit have voted to be included in the CWS [Compressed Work Schedule]” [5 U.S.C. § 6127(b)(1)]. Individual employees may still be excused if the “agency determines that mandatory participation in the CWS would cause personal hardship for the employee” [5 U.S.C. § 6127(b)(2)]. Therefore, even the federal authorizing legislation recognizes the (potentially detrimental) inability of compressed schedules to satisfy individual employee needs.

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Figure 1: Predictors of 4/10 Schedule Satisfaction

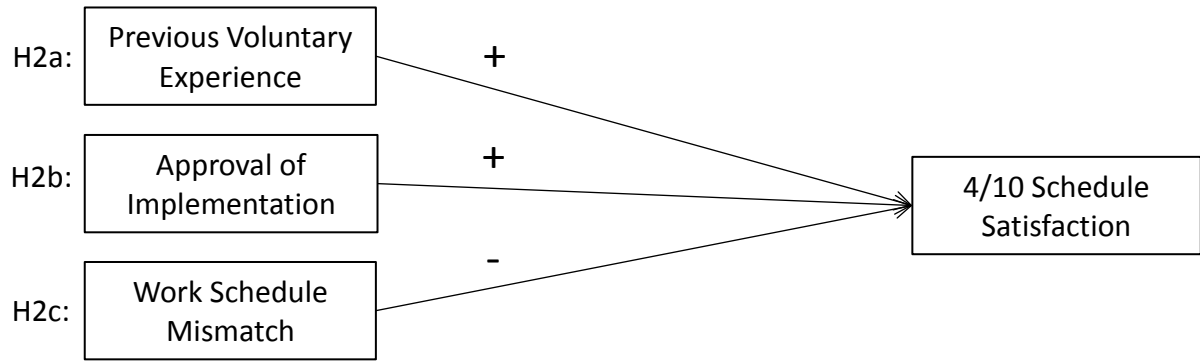


Figure 2: Timeline of 4/10 Schedule

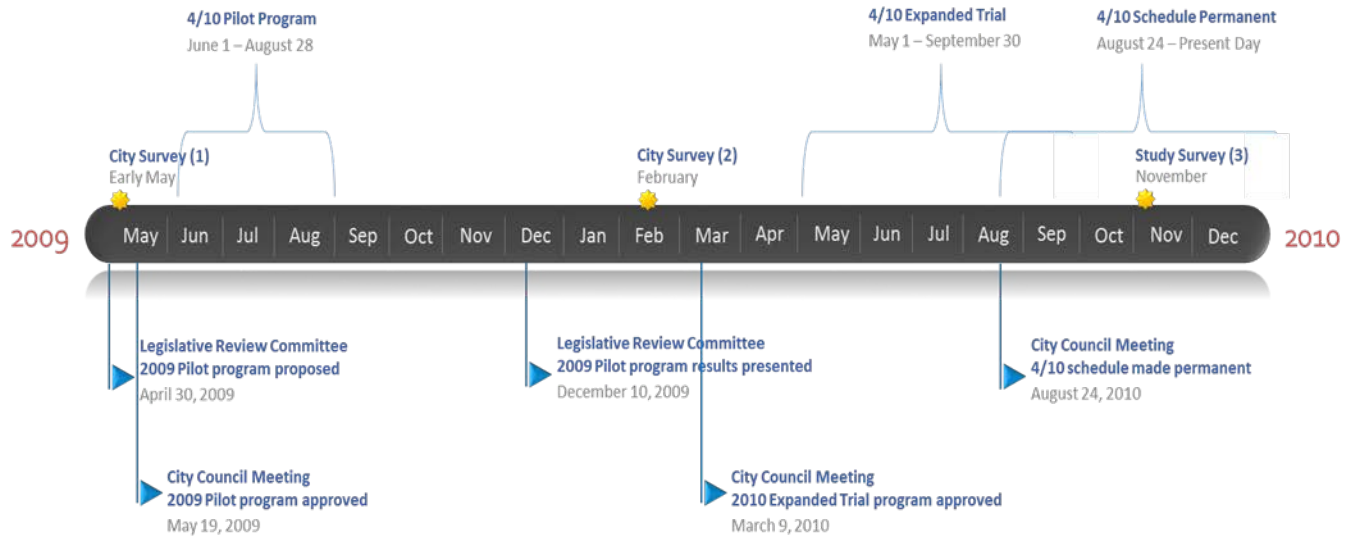


Table 1: Measure Means, Standard Deviations, and Correlations

	Range	Mean	Stdev	1	2	3	4	5	6	7	8	9	10	11	12
1 Personal Commitments	1-5	3.41	1.52	-											
2 Time with Loved Ones	1-5	3.39	1.52	0.88	-										
3 Important Activities	1-5	3.43	1.49	0.88	0.88	-									
4 Childcare/Eldercare	1-5	3.07	1.43	0.62	0.58	0.57	-								
5 Gas Money	1-5	3.59	1.29	0.69	0.69	0.68	0.47	-							
6 Personal Work Production	1-5	3.40	1.33	0.78	0.76	0.73	0.55	0.71	-						
7 Deadlines	1-5	3.39	1.29	0.76	0.73	0.71	0.51	0.68	0.89	-					
8 Energy	1-5	2.90	1.35	0.78	0.78	0.75	0.57	0.66	0.79	0.78	-				
9 Coordination w/ Co-workers	1-5	3.04	1.21	0.65	0.61	0.61	0.42	0.53	0.67	0.66	0.69	-			
10 Co-worker Work Production	1-5	3.16	1.29	0.76	0.74	0.72	0.58	0.66	0.81	0.77	0.81	0.68	-		
11 Work/Life Balance	1-5	3.38	1.46	0.89	0.86	0.87	0.59	0.69	0.80	0.77	0.80	0.67	0.80	-	
12 Work-Life Scale (Items 1-11 combined)	1-5	3.30	1.20	0.93	0.91	0.90	0.69	0.79	0.90	0.87	0.89	0.76	0.88	0.93	(.96)

Bolded $p < .01$ (2-tailed)

Table 2: Employee Leave Taken

All City Employees	All City Employees	4/10 Schedule Employees
Sick leave: June-August 2008	60,476.76 hours	14,284 hours
Sick leave: June-August 2009	57,335.13 hours	13,848 hours
Total reduction in sick leave:	3,141.63 hours	435.93 hours